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INTERNATIONAL SYMBOLS ..... Inside Rear Cover

***NOTE: In this** manual, **"left" and "right" are referred to as seen** from **the operating** position.*

Safety Rules

Read these safety rules and follow them closely. Failure to obey these rules could result in loss of control of rider, severs personal injury or death to you, yourself or bystanders or damage to property or equipment. This mowing deck is capable of amputating hands and feet and throwing objects. The triangle ⚠ in text signifies important cautions or warnings which must be followed.

IMPORTANT ▪ Safe operation practices for riding mowers.

I. General operation

1. Read, understand, and follow all instructions in the manual and on the unit before starting.
2. Only allow responsible adults, who are familiar with the instructions, to operate the unit.
3. Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blade(s).
4. Be sure the area is clear of other people before mowing. Stop unit if anyone enters the area.
5. Never carry passengers.
6. Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
7. Be aware of the mower discharge direction and do not point it at anyone. Da not operate the mower without either the entire grass catcher or the guard in place.
9. Slow down before turning.
9. Never leave a running unit unattended. Always turn off blades, set parking brake, stop engine, and remove keys before dismounting.
10. Turn off blades when not mowing.
11. Stop engine before removing grass catcher or unclogging chute.
12. Mow only in daylight or good artificial light.
13. Do not operate the unit while under the influence of alcohol or drugs.
14. Watch for traffic when operating near or crossing roadways.
15. Use extra care when loading or unloading the unit into a trailer or buck.

II. Slope operation

Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. All slopes require extra caution. If you cannot back up the slope or if you feel ieasy on it, do not mow it.

⚠ WARNING -SLOPE OPERATION

Never operate on slopes greater than 30 percent (16.7°) whkh Is a rise of three feet vertically In 10 feet horizontally. When operating on slopes that are greeter than 15 percent (5.53 but less than 30 percent use front counterweights and rear wheel weights (see your dealer). Select slow ground speed before driving onto slope. In addition to front and rear weights, use extra caution when operating on slopes with rear-mounted grass catcher. Mow UP end DOWN the slope, never across the face, use caution when changing directions and DO NOT START OR STOP ON SLOPE.

DO

- See your authorized dealer for recommendations of wheel weights or counterweights to improve stability.
- Mow up and down slopes, not across.
- Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, or bumps. Uneven terrain could overturn the unit. Tall grass can hide obstacles.

(continued on next page)

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- Use slow speed. Choose a low gear so that you will not have to stop or shift while on the slope.
- Use extra care with grass catchers or other attachments. These can change the stability of the unit.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction.

DO NOT

- *Do not* start *or* stop on a slope. If tires lose traction, disengage the blade(s) and proceed slowly straight down the slope.
- Do *not* turn on slopes unless necessary, and then, turn slowly and gradually downhill, if possible.
- Do not mow near drop-offs, ditches, or embankments. The mower could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
- Do not mow on wet grass. Reduced traction could cause sliding.
- Do *not* try to stabilize the unit by putting your foot on the ground.
- Do not use grass catcher on steep slopes.

III. Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the unit and the mowing activity. Never assume that children will remain where you last saw them.

1. Keep children out of the mowing area and under the watchful care of another responsible adult.
2. Be alert and turn unit off if children enter the area.
3. Before and when backing, look behind and down for small children.
4. Never carry children. They may fall off and be seriously injured or interfere with safe unit operation.
5. Never allow children to operate the unit.
6. Use extra care when approaching blind comers, shrubs, trees, or other objects that may obscure vision.

IV. service

1. Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.
   a) Use only an approved container.
   b) Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling. Do not smoke.
   c) Never refuel the unit indoors.
   d) Never store the unit or fuel container inside where there is an open flame or pilot light, such as in a water heater.
2. Never run a unit inside a closed area.
3. Keep nuts and bolts, especially blade attachment boils, tight and keep equipment in good condition.
4. Never tamper with safety devices. Check their proper operation regularly.
5. Keep unit free of grass. leaves, or other debris build-up. Clean up oil or fuel spillage. Allow unit to cool before storing.
6. Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
7. Never make adjustments or repairs with the engine running.
6. Grass catcher components are subject to wear, damage, and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts, when necessary.
9. Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves, and use extra caution when servicing them.
10. Check brake operation frequently. Adjust and service as required.

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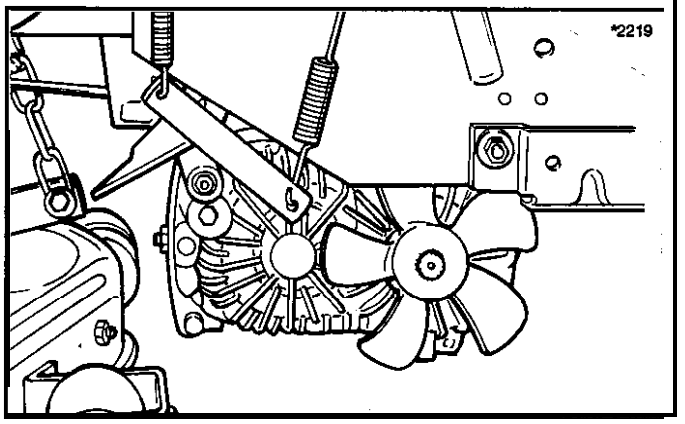
A WARNING

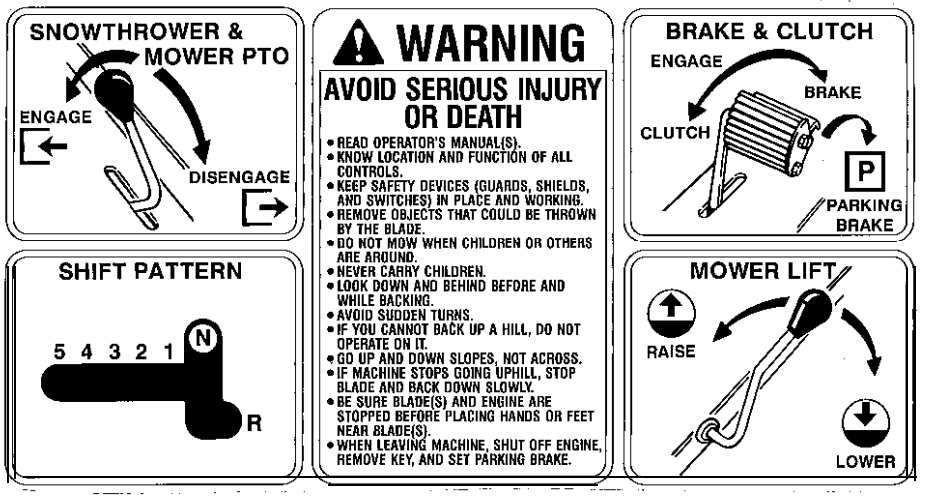
Never place hands near the hydro pump cooling fan when the tractor is running. Cooling fan is located on left-hand side of hydro pump inside the rear frame on hydro models shown below, and on top of transaxle on hydro models (Mfg. Nos. 1692259, 1692263).



Cooling Fan Location. Hydro transmission (Mfg. Nos. 1692156, 1692164) (shown with left-hand rear tire removed.)

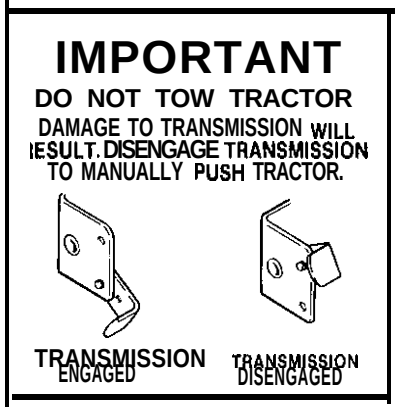
Decals

ALL WARNING, CAUTION, and **instructional** messages on your tractor and mower should be carefully read and obeyed. Personal bodily injury can result when these Instructions are not followed. The information Is for your safety and it is important. The safety messages on this page are on your **tractor and mower.**


SNOWTHROWER &
MOWER PTO
ENGAGE
DISENGAGE
WARNING
AVOID SERIOUS INJURY
OR DEATH
• READ OPERATOR'S MANUAL(S).
• KNOW LOCATION AND FUNCTION OF ALL CONTROLS.
• KEEP SAFETY DEVICES (GUARDS, SHIELDS, AND SWITCHES) IN PLACE AND WORKING.
• REMOVE OBJECTS THAT COULD BE THROWN BY THE BLADE.
• DO NOT MOW WHEN CHILDREN OR OTHERS ARE AROUND.
• NEVER CARRY CHILDREN.
• LOOK DOWN AND BEHIND BEFORE AND WHILE BACKING.
• AVOID SUDDEN TURNS.
• IF YOU CANNOT BACK UP A HILL, DO NOT OPERATE ON IT.
• GO UP AND DOWN SLOPES, NOT ACROSS.
• IF MACHINE STOPS GOING UPHILL, STOP BLADE AND BACK DOWN SLOWLY.
• BE SURE BLADE(S) AND ENGINE ARE STOPPED BEFORE PLACING HANDS OR FEET NEAR BLADE(S).
• WHEN LEAVING MACHINE, SHUT OFF ENGINE, REMOVE KEY, AND SET PARKING BRAKE.
BRAKE & CLUTCH
ENGAGE
BRAKE
CLUTCH
P
PARKING
BRAKE
SHIFT PATTERN
5 4 3 2 1
N
R
MOWER LIFT
RAISE
LOWER

Gear Model

Decals



rdro Model (Mfg. Nos. **92156, 1692164)**

SNOWTHROWER & MOWER PTO
ENGAGE
DISENGAGE
TRANSMISSION CONTROL
F
N
R
WARNING
AVOID SERIOUS INJURY OR DEATH
• READ OPERATOR'S MANUAL(S).
• KNOW LOCATION AND FUNCTION OF ALL CONTROLS.
• KEEP SAFETY DEVICES (GUARDS, SHIELDS, AND SWITCHES) IN PLACE AND WORKING.
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• DO NOT MOW WHEN CHILDREN OR OTHERS ARE AROUND.
• NEVER CARRY CHILDREN.
• LOOK DOWN AND BEHIND BEFORE AND WHILE BACKING.
• AVOID SUDDEN TURNS.
• IF YOU CANNOT BACK UP A HILL, DO NOT OPERATE ON IT.
• GO UP AND DOWN SLOPES, NOT ACROSS.
• IF MACHINE STOPS GOING UPHILL, STOP BLADE AND BACK DOWN SLOWLY.
• BE SURE BLADE(S) AND ENGINE ARE STOPPED BEFORE PLACING HANDS OR FEET NEAR BLADE(S).
• WHEN LEAVING MACHINE, SHUT OFF ENGINE, REMOVE KEY, AND SET PARKING BRAKE.
BRAKE & CLUTCH
ENGAGE
BRAKE
CLUTCH
P
PARKIN(BRAKE
MOWER LIFT
RAISE
LOWER

Hydro Model (Mfg. Nos. **1692156, 1692164)**

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Hydro Model (Mfg. Nos. 1692259, 1692263)

WARNING
AVOID SERIOUS INJURY OR DEATH
• READ OPERATOR'S MANUAL(S).
• KNOW LOCATION AND FUNCTION OF ALL CONTROLS.
• KEEP SAFETY DEVICES (GUARDS, SHIELDS, AND SWITCHES) IN PLACE AND WORKING.
• REMOVE OBJECTS THAT COULD BE THROWN BY THE BLADE.
• DO NOT MOW WHEN CHILDREN OR OTHERS ARE AROUND.
• NEVER CARRY CHILDREN.
• LOOK DOWN AND BEHIND BEFORE AND WHILE BACKING.
• AVOID SUDDEN TURNS.
• IF YOU CANNOT BACK UP A HILL, DO NOT OPERATE ON IT.
• GO UP AND DOWN SLOPES, NOT ACROSS.
• IF MACHINE STOPS GOING UPHILL, STOP BLADE AND BACK DOWN SLOWLY.
• BE SURE BLADE(S) AND ENGINE ARE STOPPED BEFORE PLACING HANDS OR FEET NEAR BLADE(S).
• WHEN LEAVING MACHINE, SHUT OFF ENGINE, REMOVE KEY, AND SET PARKING BRAKE.
• WHEN STARTING, DEPRESS CLUTCH/BRAKE PEDAL.
F
N
R
P

Hydro Model (Mfg. Nos. 1692259, 1692263)

Features & Controls

TRACTOR & MOWER CONTROLS

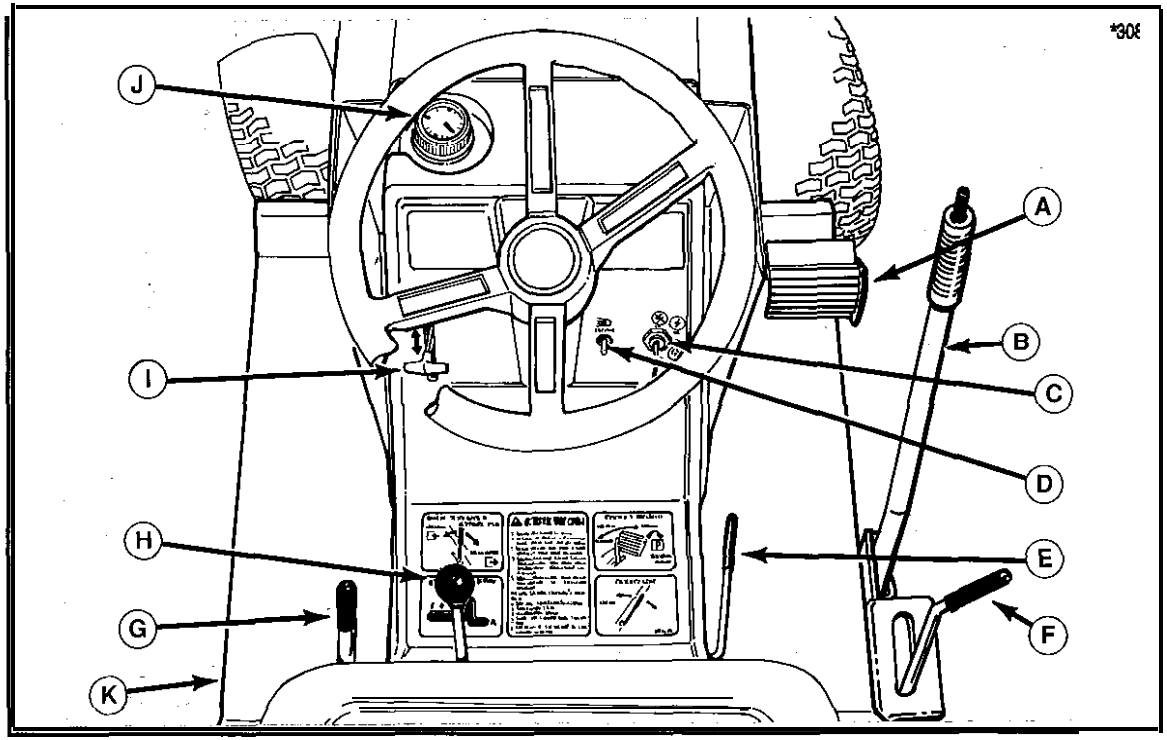

Figure 1. Tractor & Mower Controls

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Ref.	Name	Function
A	**Clutch/Brake** Pedal	Disengages tractor clutch when pressed down at least halfway. Applies brake when fully depressed. Engages parking brake when latched over footrest.
S	Large Control Lift Lever (Optional)	Lifts and holds attachments in transport position. (Required with attachments other than mower.)
C	Ignition Switch	Operates with key to start, run or stop engine.
D	Light Switch	Switches headlights on or off.
E	Small Lii Lever (Standard)	Lifts and holds mower in transport position.
F	Mower Height Control Lever	Adjusts mower cutting **height.**
G	PTO (Power Take-Oft) Lever)	Engages and disengages power to attachment. Pull back to disengage.
H	Ground Speed Control Lever	Controls ground speed and forward/reverse motion. ▪ On **hydro** model, move left and forward (down) to go forward. Pull up to go in reverse. ▪ On gear model, select forward speed 1-5 or **reverse.**
I	Engine Speed Control	Position from SLOW to FAST to control engine speed. Also position for engine CHOKE.
J	Gas Gauge/Cap	Shows amount of gasoline in the tank and serves as tank **cap.**
K	Seat Deck Release	Pull down on latch underneath left footrest while raising seat deck.

SAFETY INTERLOCK SYSTEM

Your tractor is equipped with a seat switch safety system that will automatically shut the engine off when the operator leaves the seat with the PTO engaged or the transmission lever in gear. The tractor engine will continue to run when the operator leaves the seat if the PTO is disengaged, the transmission is in neutral and the parking brake engaged.

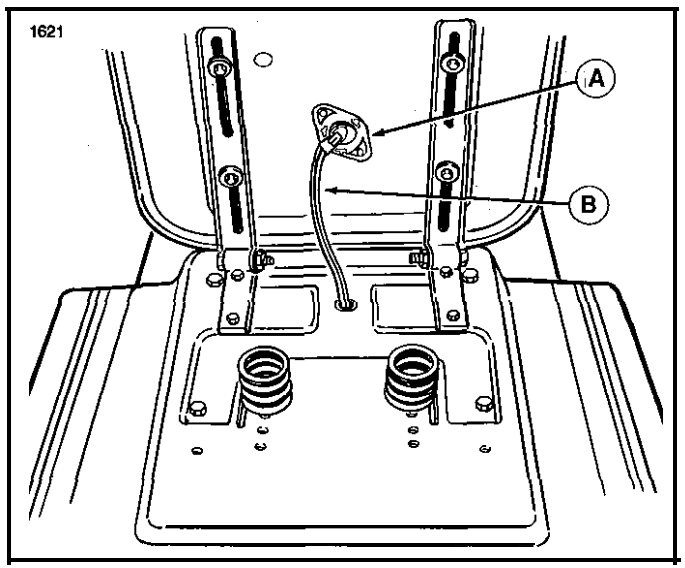

Figure 2. Safety Interlock System

See figure 2. Check the seat switch (A) every fall and spring with the following three tests. Make sure the wiring harness (B) is securely plugged into the switch.

Test 1 -Engine should NOT crank if:

A. seat is not occupied or
B. transmission lever is out of neutral or
C. PTO switch is engaged or
D. clutch/brake pedal is not depressed.

Test 2 -Engine should crank if:

A. seat is occupied and transmission lever is in neutral.
B. PTO is disengaged and clutch/brake pedal is depressed.

Test 3 -Engine should shut off if:

A. ooerator rises off seat with transmission lever in gear.
B. operator rises off seat with PTO engaged.
C. operator rises off seat without clutch/brake pedal depressed.

A WARNING

If the tractor does not pass the test, do not operate tractor. See your authorized dealer. Under no circumstance should you attempt to defeat the purpose of the safety system.

Operation

Before operating this tractor for the first time, the owner should operate in an open area without mowing, to become accustomed to the unit. The left side of the mower can be used to trim close to objects. Be sure to read all information in the Safely and Operation sections before attempting to operate this tractor and mower.

A WARNING

Never allow passengers to ride on the unit.

WARNING

To reduce fire hazard, keep the engine and mower free of grass, leaves and excess grease.

A CAUTION

Towing the tractor will cause transmission damage. Do not use another vehicle to push or pull tractor.

A WARNING

The interlock safety switches are for your safety. Do not attempt to bypass them.

A WARNING

Never operate on slopes greater than 30 percent (16.7") which is a rise of 3 feet (0.91 meters) vertically in 10" (3.1 meters) horizontally. Use front and rear wheel weights for slopes greater than 15 percent (6.59 which is a rise of 1.5' (0.45 meters) vertically in 10' (3.1 meters) horizontally. See your dealer for wheel weights. Select slow ground speed before driving onto a slops.

MOWER INSTALLATION & REMOVAL

⚠ WARNING

Engage the parking brake, disengage the PTO, stop the engine and remove the key before attempting to install or remove the mower.

NOTE: The lift chain (A, figure 3) should be connected to the rear hole in lift arm (B, figure 3) unless optional large lift arm (B, figure 1) is used to raise mower. With large lift lever, connect chain in forward hole.

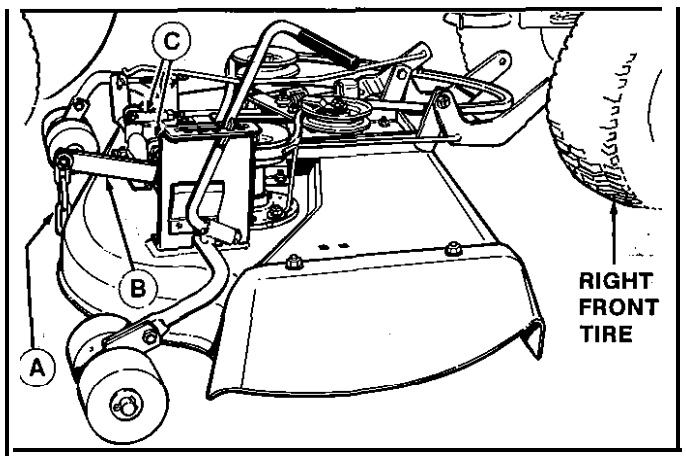

Figure 3. Installing 36" Mower
A. Lift Chain
B. Lift Arm
C. Mower Hitch Arms

1. Place your tractor on a hard level surface, with the mower on the right side of the tractor.
2. Turn the front wheels of the tractor full left.
3. Place the mower in lowest cutting position and slide it under the tractor, aligning mower hitch arms (C, figure 3) with tractor hitch (A, figure 4).

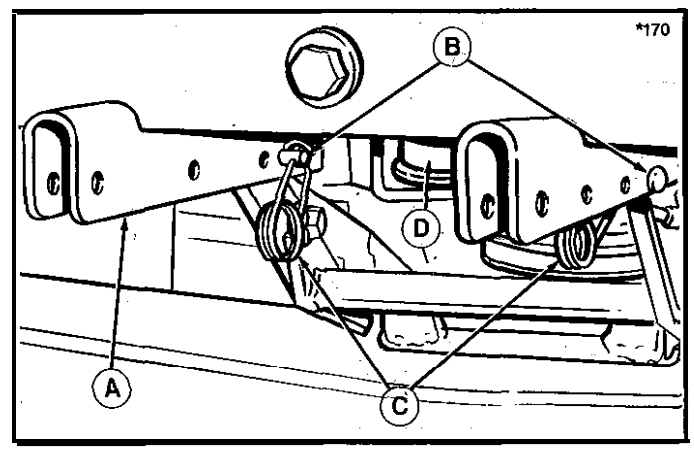

Figure 4. Tractor Hitch (under front of tractor)
A. Hitch
B. Pins
C. Safety Clips
D. Drive Belt

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4. See figure 5. Insert the link (A) into lift arm (B), then pivot back and down. Secure chain (C) to clevis (D) with pin (E) and clip (F). Use only four links of chain.
5. Insert a pry bar under front of mower deck. Lift up front of mower and insert pins (B, figure 4) to attach mower hitch arms to tractor hitch (A, figure 4). Connect the clips (C, figure 4) into the pins.

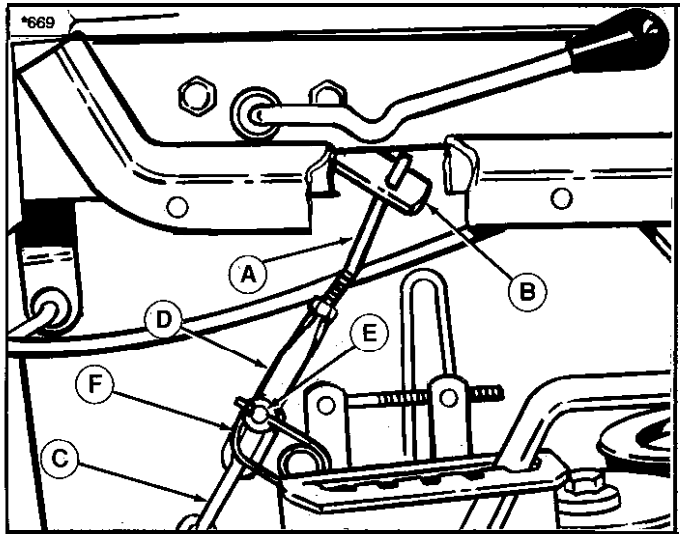
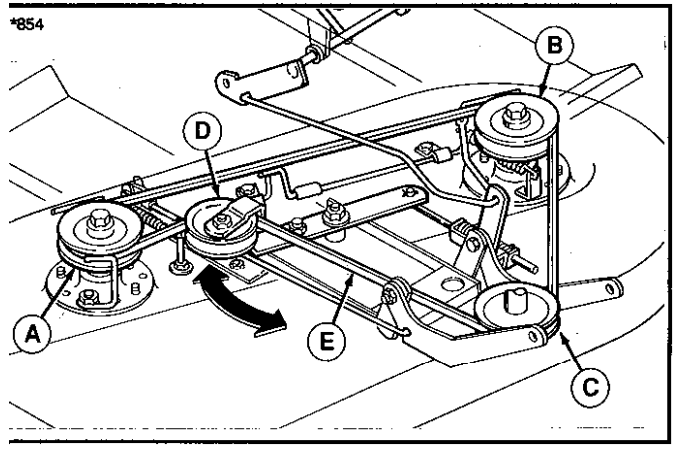


Figure. 5. Mower Lii Assembly - Small Lift Lever (Standard)
A. Lift Link
B. Lift Arm
C. Chain
D. Clevis
E. Pin
F. Clip

6. Slip the mower drive belt (E, figure 6) onto the PTO pulley (C, figure 6).



igure 6. Mower Belt Pattern
. V-Pulley, Right Arbor
. V-Pulley, Left Arbor
. Engine PTO Pulley
D. Flat idler Pulley
E. Belt

7. Loosen left-hand belt stop (A, figure 7) and right-hand belt stop (A, figure 8) as necessary. Make sure belt is property routed between bait stops as shown in figure 8.
8. Make sure the belt is properly installed on the mower pulleys. Belt pattern is shown in figure 8.

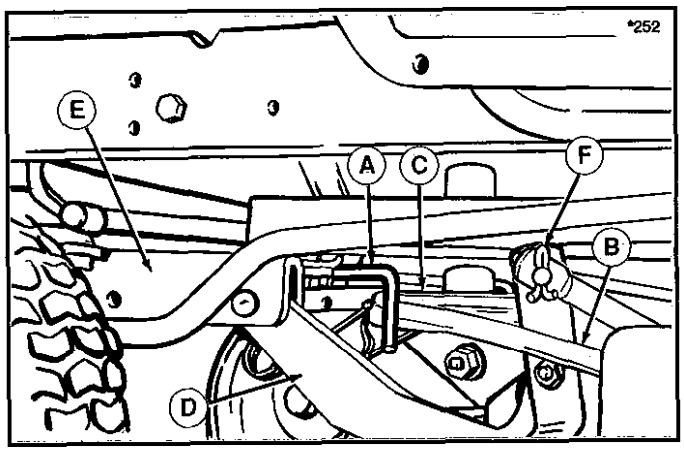


Figure 7. Left-Hand Belt Stop

A. Belt Stop
B. Belt
C. PTO Pulley
D. Mower Hitch Arm
E. Tractor Hitch
F. Cotter Pln

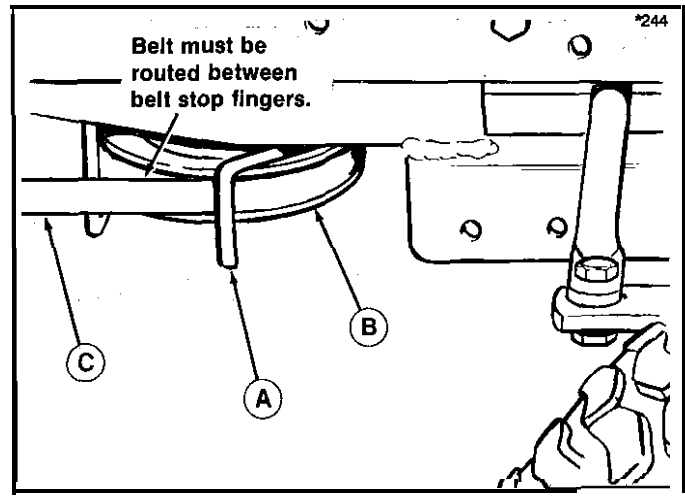


Figure 8. Right-hand Belt Stop

A. Belt Stop
B. PTO Pulley
C. Belt

9. See figure 9. Insert one end of the PTO rod, (A) into the tractor PTO arm **(B),** (in the hole marked "MOW") and secure using **the spring** clip (C). Insert the other. end of the PTO rod (A) into the mower PTO arm **(D).** Secure the PTO rod (A) and brake rod to the mower PTO arm (D) with the cotter pin (E).

10. If installing mower for the first time, or if a new belt was installed, perform the mower adiustments in the Adjustments section.

11 **.To** remove the mower, reverse the procedure.

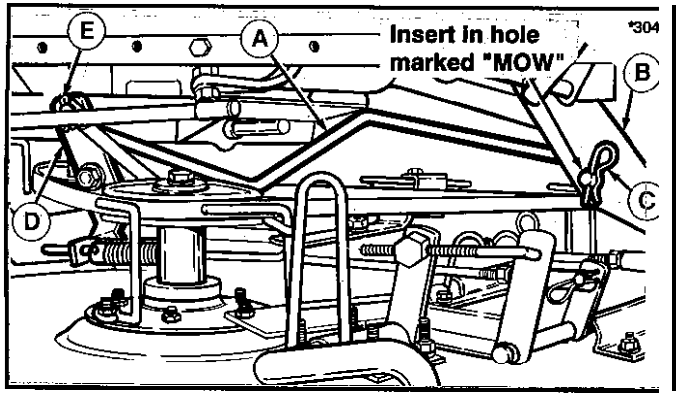


Figure 9. Installing PTO Rod (viewed from left side)
A. PTO Rod
B. Tractor PTO Arm
C. Spring Clip
D. Mower PTO Arm
E. Cotter Pin

SETTING THE MOWER CUTTING HEIGHT

a **CAUTION**
Do not mow with mower in the raised transport position or you could damage the PTO belt.

1. When traveling to ***or*** from the work **site,** raise the mower using the lift lever (B ***or*** E, figure 11). At the work site, lower mower using the lift lever.
2. Use the control lever (F, figure 11) to set the proper mowing height. See Mowing Patterns &Tips section for cutting height recommendations.

CHECKS BEFORE STARTING

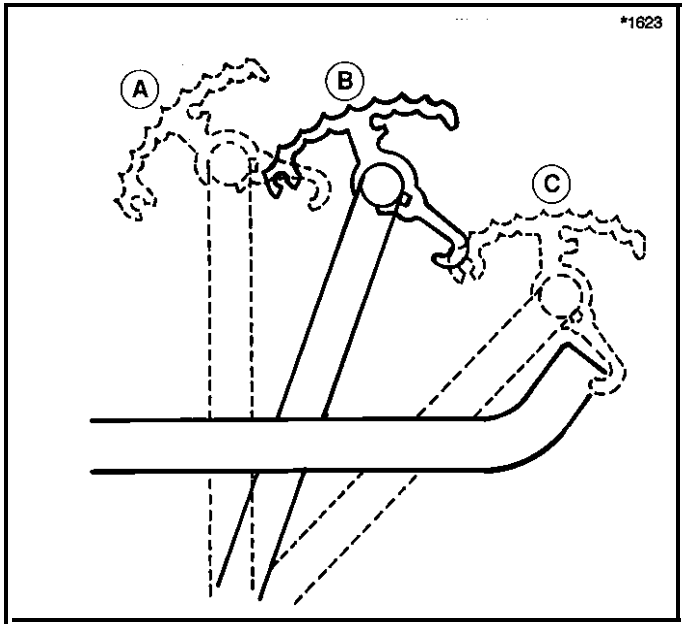
1. Make sure you have proper wheel or counterweights if required. See the slope warning on page 2. Make sure any slopes are within required limits.
2. Check that crankcase is filled to full mark on dipstick. See the engine Operator's Manual for instructions and oil recommendations.
3. Make sure all nuts, bolts, screws and pins are in place and tight.

> **A *WARNING***
>
> **Gasoline is highly flammable and must be handled with care. Never fill the tank when the engine is still hot from recent operation. Do not allow open flame, smoking or matches in the area. Avoid overfilling and wipe up any spills.**

4. Make sure you can reach all controls from operator's positions. If not, see Seat Adjustment.
5. Fill the gasoline tank with fresh gasoline. Fill to bottom of filler neck to avoid spillage and overflow. DO NOT mix oil with gasoline. Refer to engine manual for gasoline recommendations.

CLUTCH/BRAKE PEDAL OPERATION

Refer to figure 10. Depressing pedal from position A to B disengages transmission drive. Depressing pedal further from position B to C will also apply tractor brake. Parking brake is applied at position C when pedal is latched over footrest as shown.



igure 10. Clutch/Brake Pedal

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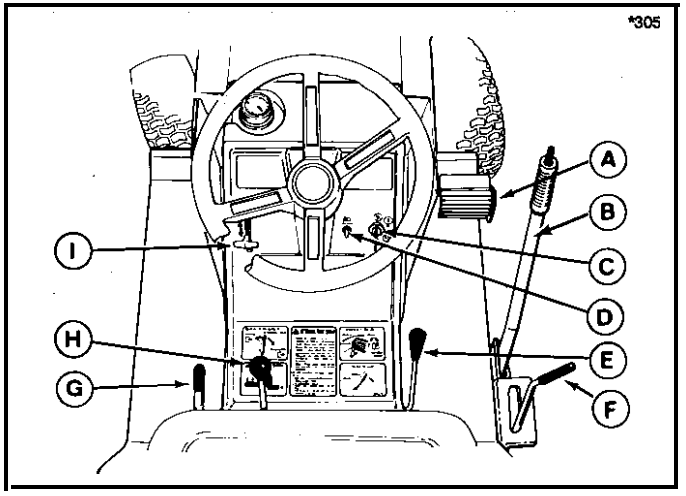
STARTING THE ENGINE

Refer to figure 11.

1. Seat yourself on the tractor seat in the operating position. Set the parking brake using the clutch/brake pedal (A).
2. Set engine speed control (I) to CHOKE. A warm engine may not required choking.
3. Lift the PTO lever (G) as far as it will go to the rear to disengage the attachment
4. Set the ground speed control lever (H) in NEUTRAL.
5. Insert the key into the ignition switch (C) and turn it to START.
6. Move the engine speed control (I) to SLOW. Warm up the engine by running it for at least a minute before engaging the PTO lever or driving the tractor.



gure 11. Tractor & Mower Controls
Clutch/Brake Pedal
. Large Lift Lever ▪ (Optional)
. Ignition Switch
Light Switch
E. Small Lift Lever (Standard)
F. Mower Height Control Lever
G. PTO (Power Take-Off) Lever
H. Ground Speed Control Lever
I. Engine Speed Control

SELECTING GROUND SPEED & ENGINE SPEED

On hydro models, ground speed is infinitely variable according to how far the control lever (H, figure 11) is pushed in the forward ***or*** reverse position.

On gear models, ground speed is selected by moving the control lever (H, figure 11) to the appropriate gear selection. Most mowing is done in 3rd or 4th gear with engine speed between 3/4 and full speed. If the terrain is rough, hilly or sloping, use first or second gear. If the grass is wet or over three inches (76mm) high, use full engine speed (with low gear) so the mower will have enough power to cut the grass. Shift gears only with tractor stopped and clutch/brake pedal fully depressed.

> **A *WARNING***
> **Make sure desired direction is clear of objects, people and animals.**

1. If you are ready to mow, set the mower to the desired cutting height using mower height adjuster (F, figure 11).
2. Engage the mower PTO using lever (G, figure 11) with moderately fast motion. Engaging the PTO too slowly may cause belt wear.
3. Set engine speed control (I, figure 11) for 1/3 to 1/2 speed. Select the gear best suited for conditions.
4. Release parking brake by depressing clutch/brake pedal (A, figure 11) & unlatching pedal from the footrest.
5. On hydro models, move the ground speed control lever (H, figure 11) to the desired direction and speed of travel to start tractor in motion.

   On gear models, depress clutch/brake pedal to disengage clutch. Use the ground speed control lever (H, figure 11) to select the gear best suited for conditions, then slowly release clutch/brake pedal to engage clutch and start tractor in motion.
6. Adjust engine speed control (I, figure 11) to desired speed. Between 3/4 and full speed is recommended for mowing.

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STOPPING THE TRACTOR

1. On hydro models, move the ground speed control lever (H, figure 11) into the NEUTRAL position to make a gradual stop. To make a more rapid stop, depress the clutch/brake pedal (A, figure 11). If you stop by depressing the pedal, move ground speed control lever to NEUTRAL before releasing the pedal.

   NOTE: Tractor Mfg. Nos., 1692259 & 1692263 will return to neutral automatically from forward speeds when clutch/brake pedal is depressed.

   On gear models, press the clutch/brake pedal (A, figure 11) down only far enough to disengage the clutch (as shown in figure IO) to make a gradual stop. For a more rapid stop, press pedal down farther to apply the brake.

2. Engage the parking brake by locking clutch/brake pedal on footrest as shown in figure 10.
3. Disengage the PTO and lower the attachment.
4. Set engine speed control (I, figure 11) to SLOW. Stopping a hot engine too fast may cause engine damage. Let engine idle for about a minute.
5. Turn key to OFF and remove it.

⚠ WARNING

Before leaving the operator's position for any reason, engage the parking brake, disengage the PTO, stop the engine and remove the key.

⚠ WARNING

To reduce fire hazard, keep the engine, tractor and mower free of grass, leaves and excess grease. Do not stop or park tractor over dry leaves, grass or combustible materials.

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PUSHING THE TRACTOR BY HAND

A CAUTION

Do not tow the tractor. Damage may result to the transmission.

Hydro Model (Mfg. Nos. 1692156, 1692164)

1. With engine off and key removed, disengage the PTO by pulling back on lever (G, figure 11)
2. Pull the lift lever (B or E, figure 11) back to raise the mower/attachment to the transport position.
3. See figure 12. Move hydro release lever (A) to the PUSH position by rotating the lever upwards and engaging the *lever* capscrew in hole.

   To drive the tractor, release lever must be in the DRIVE position with bottom of lever positioned several inches away from plunger (B, figure 12).

Hydro Model (Mfg. Nos. 1692259, 1692263)

1. With engine off and key removed, disengage the PTO by pulling back on lever (G, figure 11)
2. Pull the lift lever (B or E, figure 11) back to raise the mower/attachment to the transport position.
3. See figure 13. The release lever is located under the rear (right-hand) tractor frame, above the transmission. Release lever must be in the rearward position to push the tractor by hand.

   To drive the tractor, release lever must be moved completely forward to engage the DRIVE position.

Gear Model

1. With engine off and key removed, disengage the PTO by pulling back on lever (G, figure 11)
2. Pull the lift lever (B or E, figure 11) back to raise the mower/attachment to the transport position.
3. Place ground speed control lever in the NEUTRAL position.
4. Unlock parking brake.

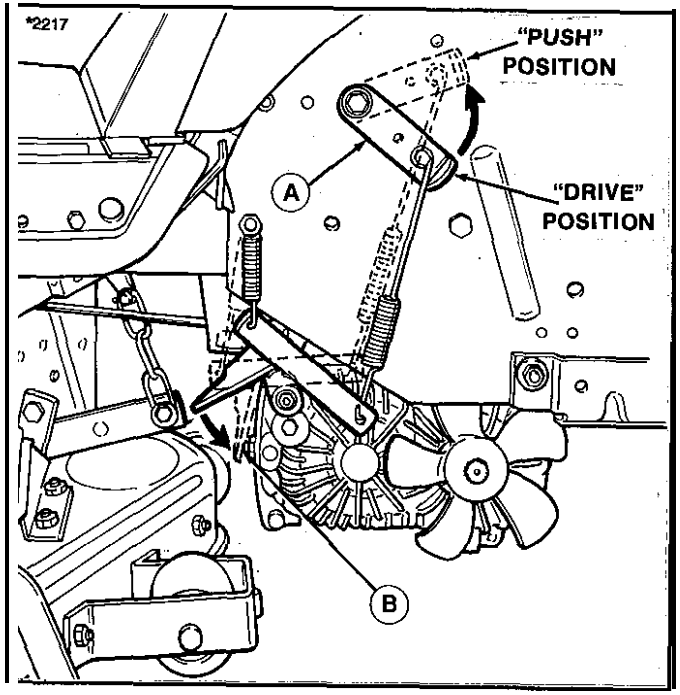
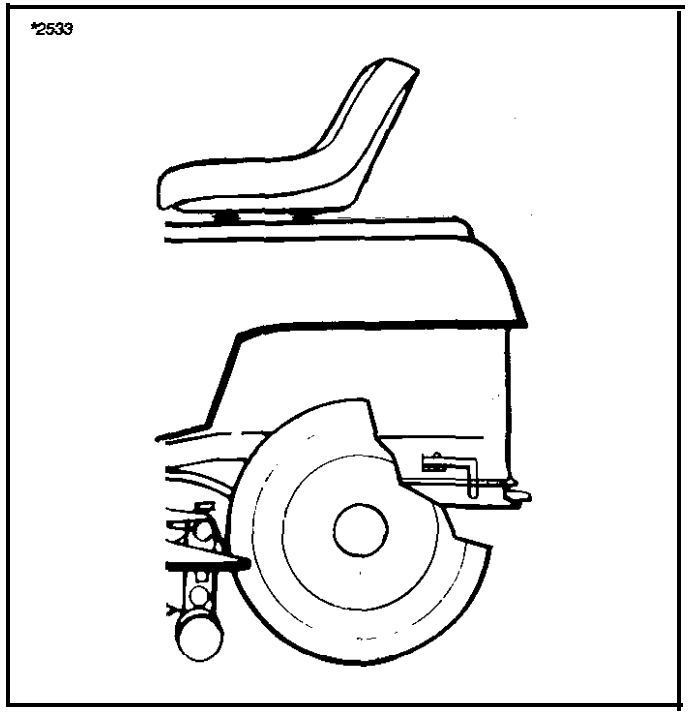


Figure 12. Release Lever - Hydro Model (Mfg. Nos. 1692156, 1692164) (Behind left rear wheel)
A. Release Lever
B. Plunger



gure 13. Release Lever - Hydro Model (Mfg. Nos. 92259, 1692263)

Mowing Pattern & Tips

For the first use of the mower choose a smooth level area. Cut long straight strips overlapping slightly.

The size and type of area to be mowed determines the best mowing pattern to use. Obstructions such as trees, fences and buildings must also be considered. Where possible, make one or two passes in a clockwise direction around the outside of the area to keep the cut grass off fences and walks. The remainder of the mowing should be done in a counterclockwise direction so the clippings are dispersed on the cut area.

Keep in mind the following lawn care and mowing tips:

1. Too much maintenance is as detrimental to your lawn as neglect.
2. Mow when grass is 3-5 inches tall. Don't cut shorter than 2 to 2-1/2 inches. Cut only the top one-third of the grass blade. Cutting below this level can lead to thatch problems. Your mower has a cutting height adjustment that can help you maintain a proper length.
3. For extremely tall grass, set the cutting height at maximum for the first pass, and then reset to the desired height and mow again.
4. Mow often. Short clippings of an inch or less decompose more quickly than longer blades.
5. Keep the blades on your mower sharp for finer clippings.
6. Let grass grow a bit longer when it is hot to reduce heat build-up and protect grass from heat damage.
7. Use slow-release fertilizer for slow, even growth.
8. Don't cover grass surface with a heavy layer of clippings. Consider using a grass collection system and starting a compost pile.
9. Aerate lawn in spring, consider renting an aerator which removes cores of soil from the lawn. This increases the speed of clipping decomposition and deep root growth by opening up the soil and permitting greater movement of water, fertilizer and air.
10. Don't over-water - too much water can encourage disease development.
11. Mow when the grass is dry, preferably in the late afternoon when the temperatures are cooler.
12. Where possible, change patterns occasionally to eliminate matting, graining or a corrugated appearance.
13. For wet grasses, grasses prone to wheel tracking and for collecting clippings:
    a. Use sharp blades.
    b. Raise deck 1/4" higher in front than in rear.
    c. Maximum engine speed.
    d. Clean deck of built-up material/caked-on grass.
    e. Check for free movement of mower idler pulley.
    f. Use slow ground speed.
14. For dry conditions where grass blow-out is a problem:
    a. Use sharp blades.
    b. Raise deck flat to 1/8" maximum lower in front.
    c. Use 3/4 engine speed.
    d. Clean deck of built-up material/caked-on grass.

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MULCHING MOWER OPERATION (Optional Attachment)

Mulching

Mulching consists of actually cutting and recutting clippings into tiny particles and blowing them into the lawn. These tiny particles decompose rapidly into by-products your lawn can use. Under proper conditions, your mulching mower will virtually eliminate noticeable clippings on the lawn surface.

Keep in mind these mulching tips:

a. Use mulching mower or mulcher kit without shredders for grass mulching.

b. Install shredders for leaf shredding.

c. Use maximum engine speed.

d. Raise height of cut if excessive power is used.

e. Must use sharp blades. Do not use lift tabs or high lift blade when mulching.

f. Adjust to lower ground speeds in heavy grass or if windrow is present.

g. Clean deck of built-up material/caked-on grass.

h. Check for free movement of mower idler pulley.

Clippings Are Beneficial

A common misconception about clippings is that they automatically lead to thatch. However, clippings produced by the mulching methods actually contribute to a healthy lawn because they:

1. Act as a safe, non-polluting and inexpensive fertilizer that nourishes your lawn. Fresh cut blades are a rich source of nitrogen which is essential to lush growth. And one garbage bag of clippings contains about 1/4 lb. of usable organic nitrogen.
2. Reduce the evaporation of water from your lawn.
3. Provide a cushioning layer to reduce lawn wear.
4. Moderate soil temperature.
5. Save money normally spent on trash bags.

Mowing Conditions

The best mulching results from mowing when lawn is dry and grass blades are not over 5" long. Follow these guidelines for best results:

a. Do not use the mower as a mulching mower during the first two or three mowings in the spring. The long grass blades, quick growth, and often *wetter* conditions are more suitable for side-discharge (broadcasting) or grass bagging operation.

(Continued on next page)

b. Avoid mulching after rain or heavy dew. It may be better to mow later in the day or early evening when lawn is drier.

c. Change the mowing pattern each time.

d. If mulching baffles are removed, the original deflector must be in operating position for safe side-discharge mowing.

How Much Grass To Cut Off

Removing too much grass height in one cutting may result in an unsatisfactory cut: windrowing, clumping, or uneven dispersal of clippings may result. It is best to mow when the grass is between 3-5" tall, although this will depend on your personal preference for lawn appearance. A good rule to follow is to cut only the top one-third of the grass blade at a time (maximum of **1-1/2").** Cutting more off the grass blade, particularly in wet spring conditions, can lead to thatch problems.

Engine Speed &Ground Speed

Use full engine throttle matched with a slower ground speed so that clippings will be finely cut. A better cut may result from cutting the same area in two passes, each time cutting only **3/4"** of grass blade. Short clippings of **1"** or less decompose more quickly than longer blades.

NOTE: When mulching *under heavy cutting conditions, a rumbling sound may be present and is normal.*

The Proper Equipment

Always keep the mower blades sharp and balanced. Blades should be sharpened at the beginning of every mowing season. If the tips of grass blades brown after cutting, this may be a sign of dull blades tearing, rather than cutting, the grass blades.

Keep the underside of the mower deck and baffles clean so that clippings are properly circulated, chopped, and discharged back into the lawn.

The Best Combination

We recommend that you experiment with the height of cut position and tractor ground speed that will give you the best cut. Start with a higher cutting height and try increasing lower settings until you find a cutting height that is matched to your mowing conditions and preferences. Since mulching requires more horsepower than side-discharging, using a slower ground speed is important for proper mulching operation.

Leaf Shredding (Mulcher Kit Only)

Patented Shredder Blades virtually eliminate raking leaves. Up to 512 cutting edges pulverize leaves into tiny particles, which quickly and naturally decompose into food for your lawn. Shredder Blades must be removed when you choose to mulch grass clippings.

Normal Care

SCHEDULE ▪ The following schedule should be followed for normal care of your tractor and mower. You will need to keep a record of your operating time. Determining operating time is easily accomplished if the tractor is equipped with an optional hourmeter. If not, multiply the time it takes to do one job by the number of times you've done the job.

Safety Items	See	First Use	Each Use	Every 5 Hours	Every 25 Hours	Every 100 Hours	Spring & Fall
Check safety interlock system.	pg. 10	●					●
Check tractor brake adjustment.	pg. 49-53	●					●
Check mower blade brake adjustment.	pg. 68		●				●
Normal Care Items							
Check rider & mower for loose hardware.		●	●	●			
Check engine oil level.	*	●	●	●			●
Check engine air filter.	*				***●		●
Change engine oil and filter.**	*				***Every 50 hrs.		●
Lubricate rider & mower.	pg. 27-30				●		●
Check tire pressure.	pg. 26				●		●
Check battery fluid level.	pg. 34				***●		
Check transmission fluid (hydro- model, Mfg. Nos. 1692156, 1692164).	pg. 32	■			■		■
Change transmission fluid (hydro models).	Dealer	Every 400 hrs. or for hydro pump service only.					
Check fuel filter.	pg. 27					●	
Clean battery & cables.	pg. 34					●	
Clean/sharpen blades.	pg. 36				●		
Inspect spark plug.	*					●	
Check belt tension.	pg. 64-67					●	●

*See the engine manufacturer's owner's manual.
*Change original engine oil **after** first 5 hours of operation.
***More** often in hot (over 85" F: 30' C) weather or dusty operating conditions.

RAISING THE HOOD &SEAT DECK

1. To raise the hood, grasp both sides of the hood (A, figure 14) near the dash and pull outward. Pivot the hood up and forward.

CAUTION

Do not run the engine with the hood raised. Engine heat can cause damage to the headlight bezel & hood.

2. To open the seat deck, pull down the latch (B, figure 14) located ahead of the left rear wheel, and tilt seat deck back.

CHECKING/ADDING GASOLINE

CAUTION

Never use gasoline containing METHANOL, gasohol containing more than 10% ethanol, gasoline additives, premium gasoline, or white gas because engine/fuel system damage could result.

Check the gas gauge/cap to be sure there is enough gasoline to complete the job. To add gasoline, remove the gas gauge/cap. Refer to your engine manual for gasoline recommendations. Install and hand tighten the gas gauge/cap.

CHECKING TIRE PRESSURE

Front tire pressure should be 12 to 15 psi (82 to 103 kPa). Rear tire pressure should be 6 to 8 psi (41 to 55 kPa).

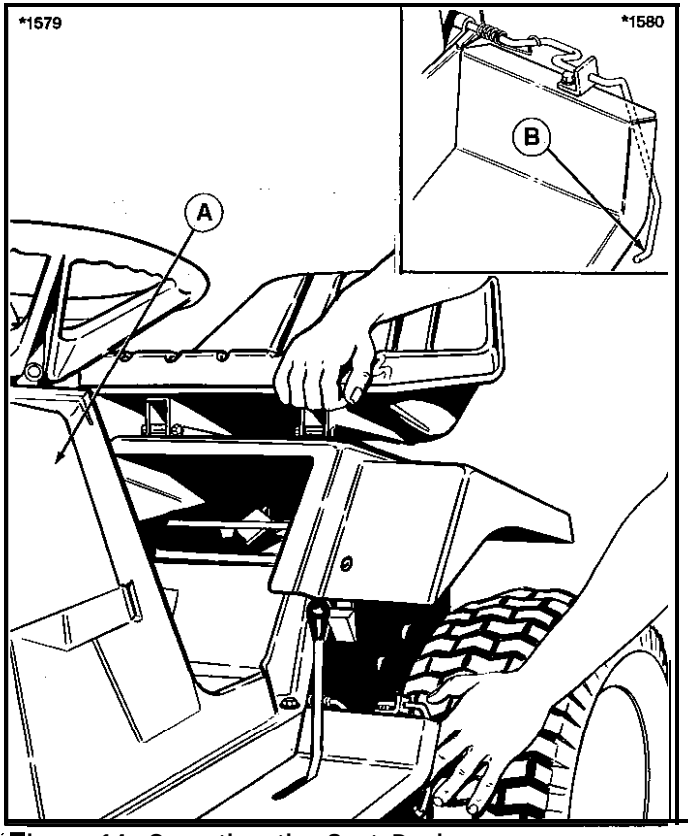

Figure 14. Operating the Seat Deck
A. Hood B. Latch

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CHECKING FUEL FILTER

A WARNING

Do not remove fuel filter when engine is hot, as spilled gasoline may ignite. Do Not spread hose clamps further than necessary. Ensure clamps grip hoses firmly over filter afler installation.

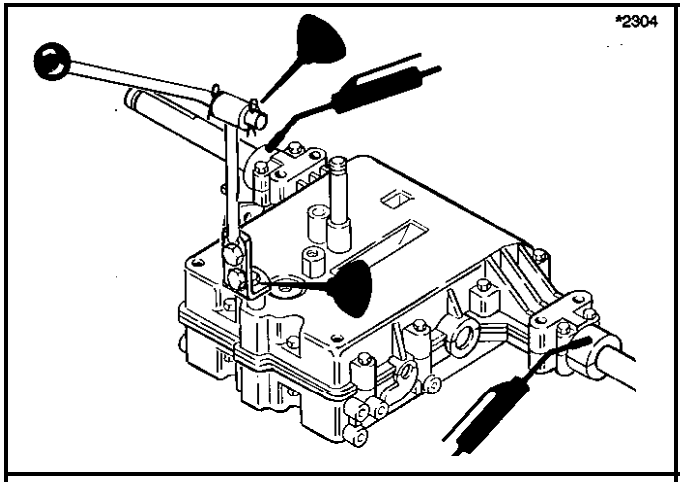
The fuel filter is located in fuel line between fuel tank and carburetor. If filter is dirty or clogged, replace as follows. Place a container below filter to catch spilled gasoline.

1. Using a pliers, open and slide hose clamps from fuel filter.
2. Remove hoses from filter.
3. Install new filter in proper flow direction in fuel line. Secure with hose clamps. See warning at beginning of procedure.

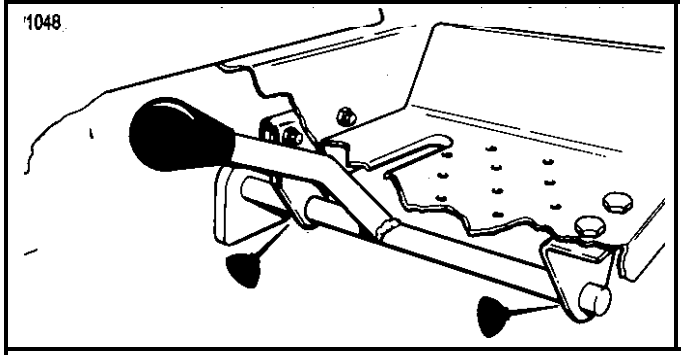
LUBRICATION

Lubricating the Tractor

Lubricate the tractor as shown in figures 15 - 20. When a grease gun is shown, wipe the fitting clean, apply two or three shots of lithium base automotive grease, and wipe off excess grease. When an oil can is shown, wipe the area clean, apply a few drops of oil (SAE 30), then wipe up drips or spills.



igure 15. Shift Lever Lubrication -Gear Models



igure 16. PTO Lever Lubrication

No

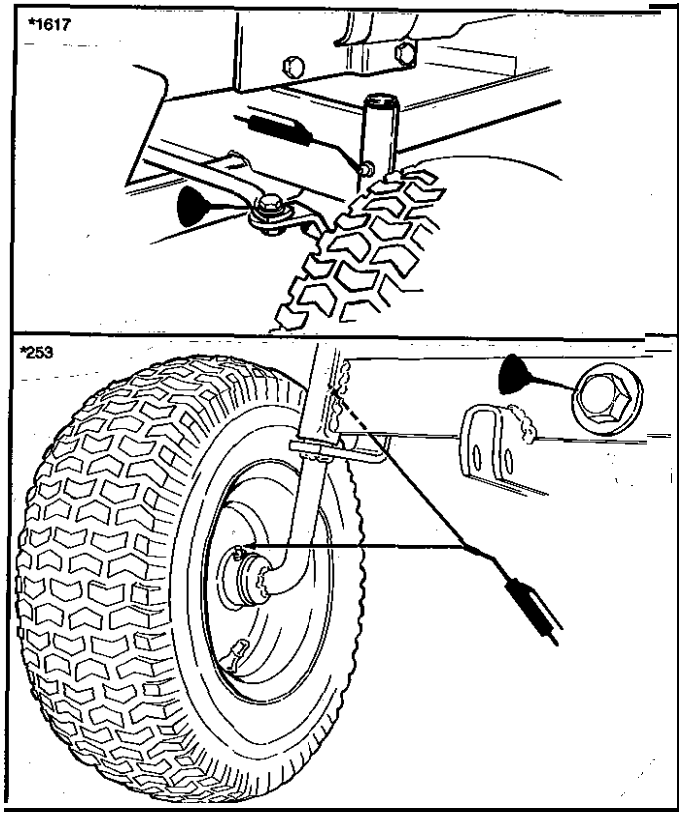


Figure 17. Front Axle
fittings on each side)
28

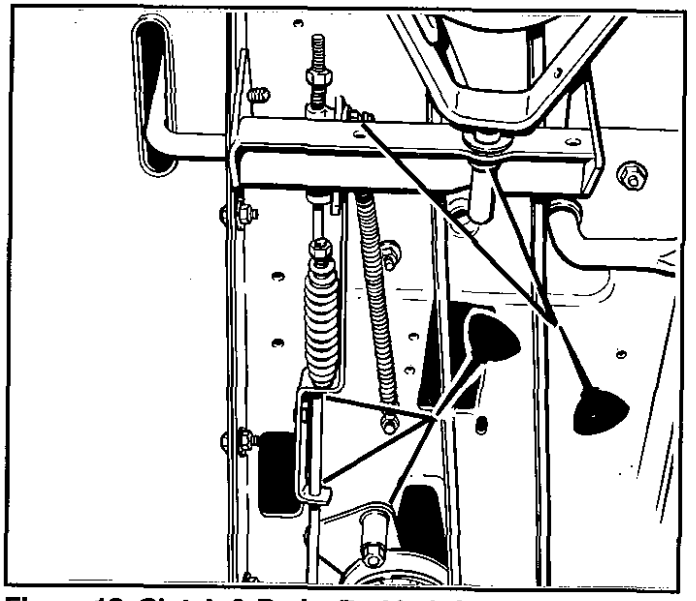


Figure 18. Clutch & Brake Rod Lubrication - Gear Models

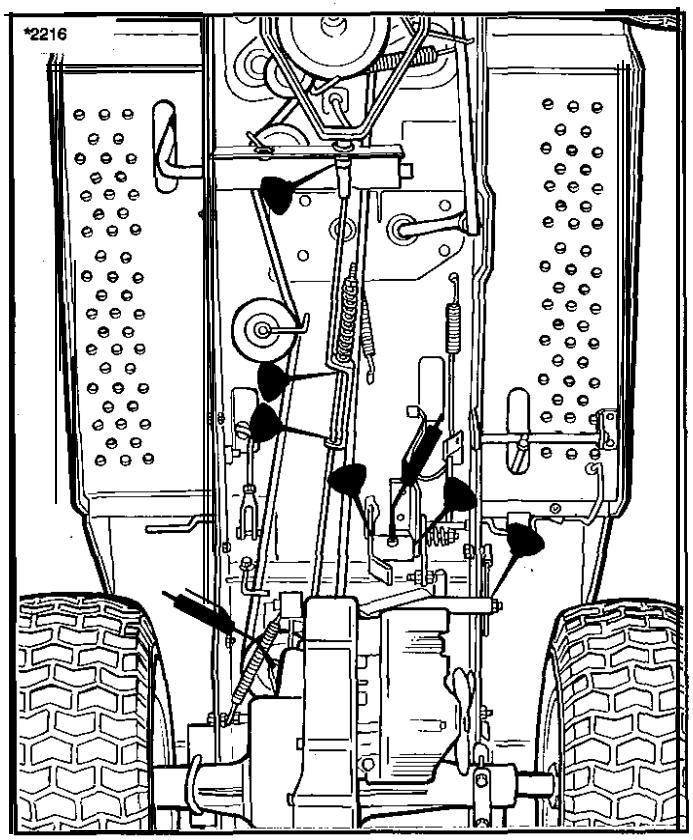


Figure 19. Clutch & Brake Rod Lubrication - Hydro Models (Mfg. Nos. 1692156, 1692164)

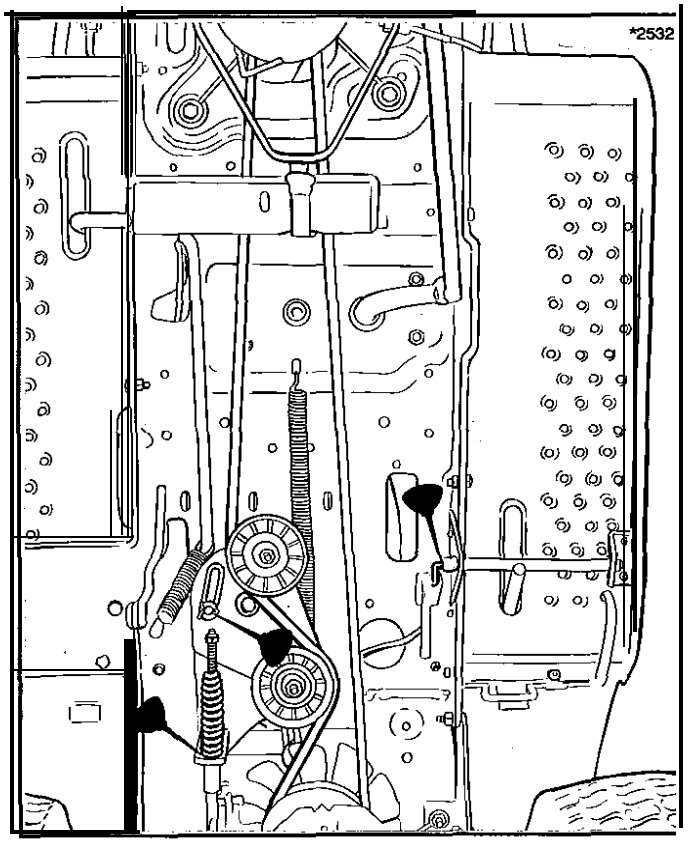
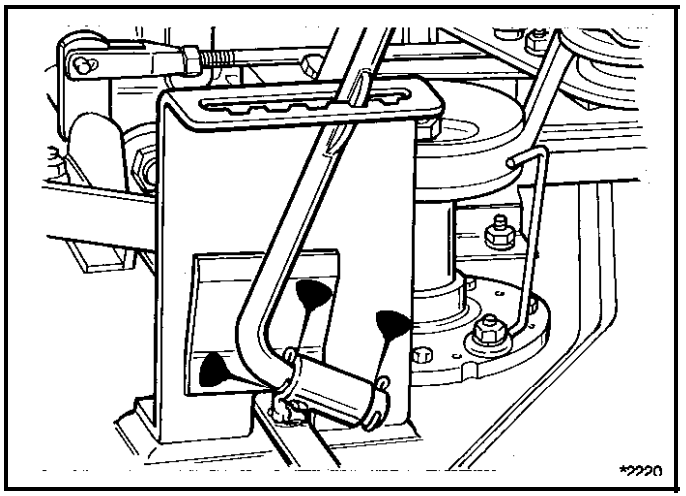


Figure 20. Clutch & Brake Rod Lubrication - Hydro Models (Mfg. Nos. 1692259, 1692263)

Lubricating the Mower

Lubricate the mower as shown in figures 21 ▪ 23. Also lubricate the grease fittings on the mower idler pulley and arbors (underneath the mower deck). Use an oil can with medium weight (SAE 30) oil. Brush and wipe dirt and grass from the area before applying oil. Wipe up drips and spills. Keep oil off belts and pulleys.



gure 21. Lubricate Helght Control Lever & Point here Roller Bar Contacts Bracket

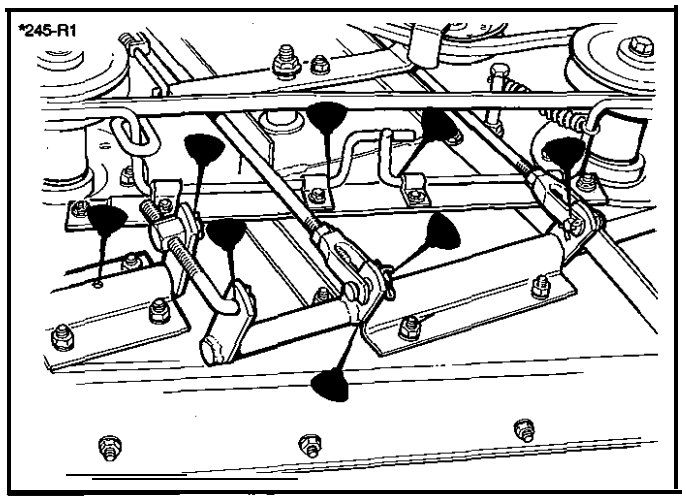


Figure 22. Lubricate Brake Lever, Clevises & Leveling Rod.

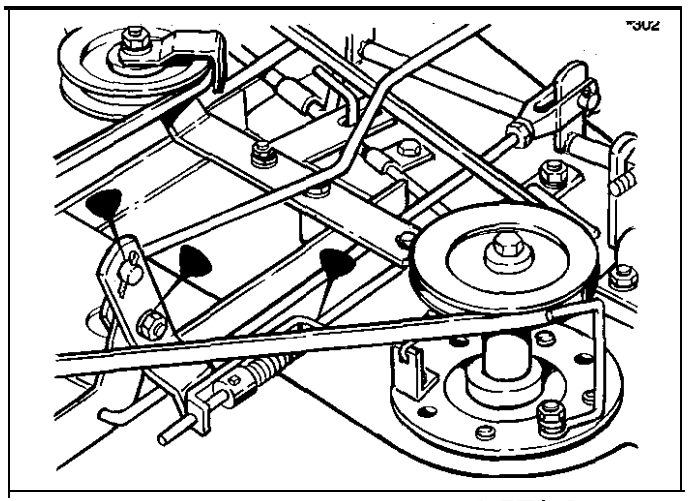


Figure 23. Lubricate Hitch, PTO Rod & PTO Arm

CHECKING TRANSMISSION FLUID ▪ HYDRO MODELS (Mfg. Nos. 1692156, 1692164)

1. Allow tractor to cool after operation. Fluid must be cool for an accurate check.
2. The fluid level is visible in the reservoir (figure 24) without removing cap. The level should be between the two lines. If not, go to step 3.
3. Raise the seat deck.
4. Before removing reservoir cap, clear all grass and debris from battery compartment and area around the hydro reservoir.
5. Remove the reservoir cap. If diaphragm does not come out with cap, remove it. Add 30W premium grade oil as required. If oil is black or milky, see your dealer to determine cause.
6. Check the level again after operating the tractor a few times. If level is consistently low, see your dealer to check for leaks.

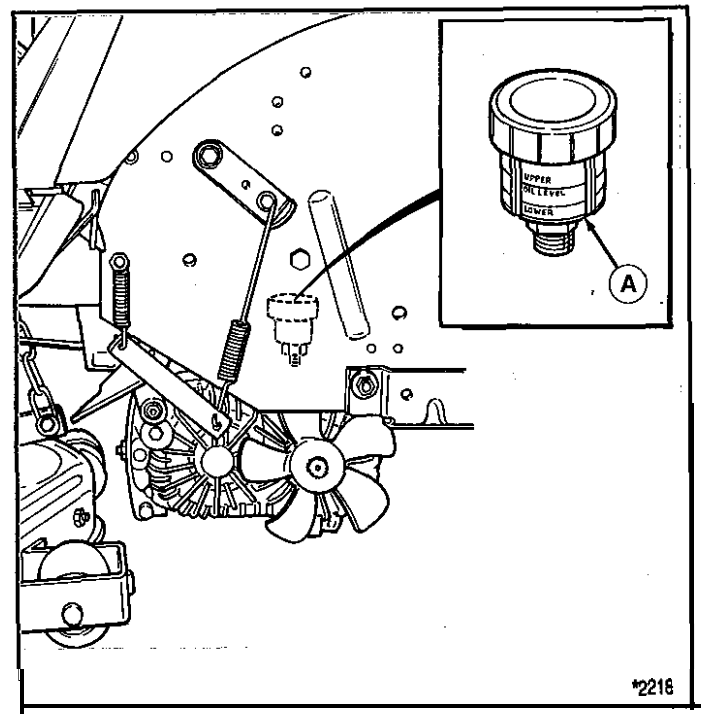


Figure 24. Hydrostatic Resetvolr - Hydro Models (Mfg. Nos. 1692156, 1692164)

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TRANSAXLE ▪ HYDRO MODELS

The hydro transaxle is a sealed unit. The transaxle is packed with grease and does not require any further lubrication unless a service overhaul is performed.

On hydro models equipped with hydro pump (figure 25), apply two shots of grease every 100 hours to fitting on input shaft of pump as shown in figure 25.

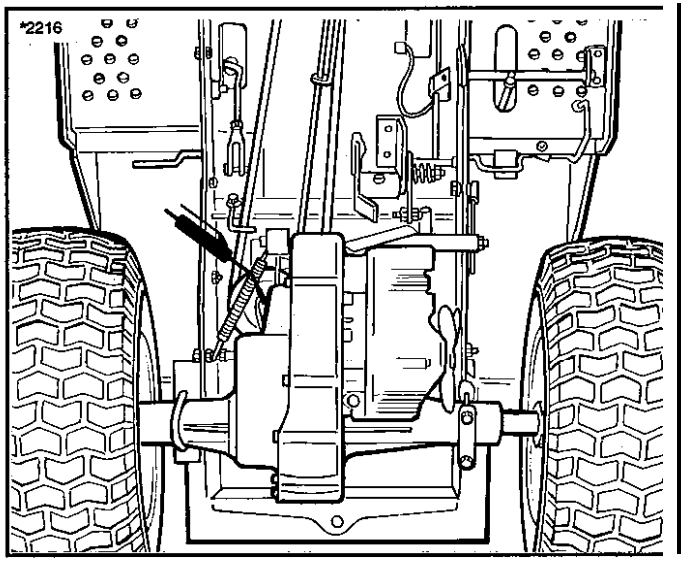

Figure 25. Ransaxle Grease Fitting ▪ Hydro Models (Mfg. Nos. 1692156, 1692164)

BATTERY MAINTENANCE

Checking Battery Fluid

1. **Raise** the seat.
2. Remove battery filler caps (C, figure **26),** one at a time.
3. Fluid must be even with split ring full mark (figure 26). If not, add distilled water.
4. Reinstall filler caps.

Cleaning the Battery Cables

WARNING

Be careful when handling the battery. Avoid spilling electrolyte. Keep flames and sparks away from the battery.

WARNING

When removing or installing battery cables, disconnect the negative cable FIRST and reconnect it LAST. If not done in this order, the positive terminal can be shorted to the frame by a tool.

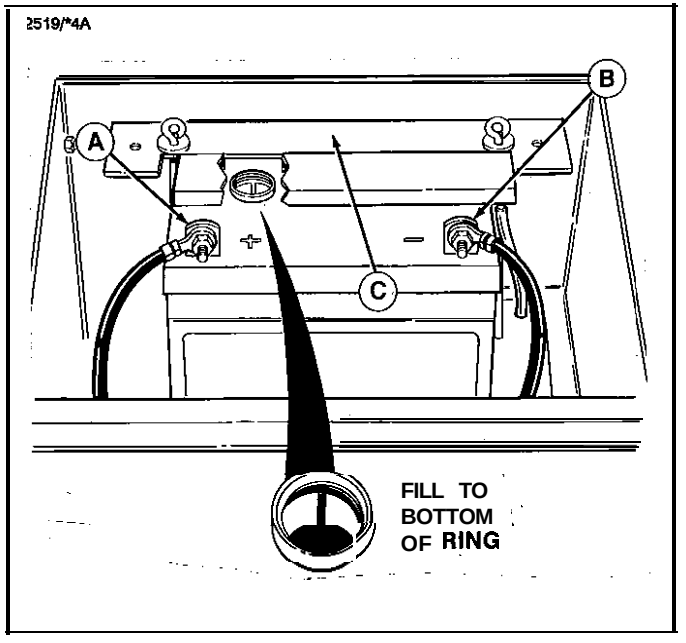

Figure 26. Battery
A. Positive Terminal
B. Negative Terminal
C. Battery Clamp

1. Disconnect the cables from the battery, negative cable first (figure 26).
2. Remove the battery clamp, then remove the battery.
3. Scrub the battery, cables, and battery compartment with baking soda and water.
4. Clean the battery terminals and cable clamps with a wire brush.
5. Reinstall battery and clamp (figure 26).
6. Connect cables, positive cable first.
7. Coat cable clamps and terminals with grease or petroleum jelly.

SERVICING THE MOWER BLADES

1. Remove mower from tractor.
2. **Check** both blades. Blades should be sharp and free of nicks and dents. If not, sharpen blades as described in following steps.

A WARNING

For your personal safety, do not handle the sharp mower blades with bare hands. Careless or improper handlIng of blades may result in serious injury.

3. To remove blade for sharpening, use wooden block to hold blade while removing its blade mounting **capscrew** (figure 27).
4. Use a file to sharpen blade to fine edge. Remove all nicks and dents in blade edge. If blade is severely damaged, it should be replaced.
5. Balance the blade as shown in figure 28. Center the blade's center hole on a nail lubricated with a drop of oil. A balanced blade will remain level.

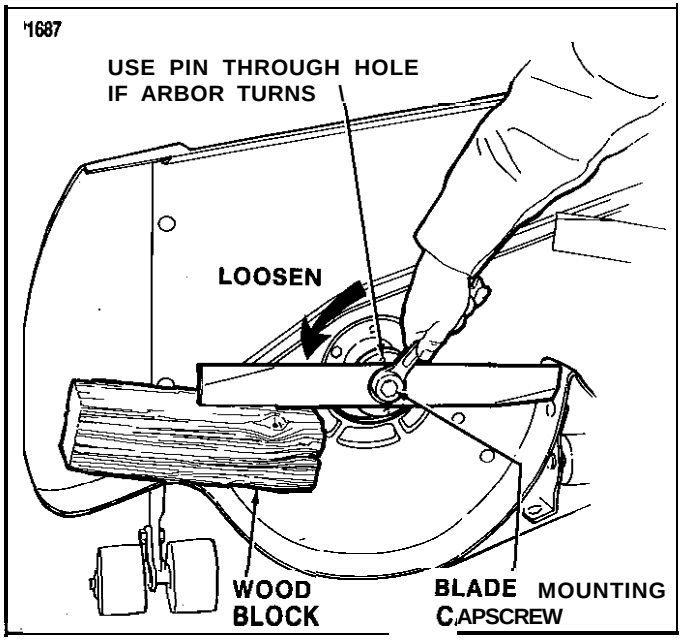

Figure 27. Removing the Blade

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A WARNING

For your personal safety, blade mounting capscrews must be installed with the cup washer and spline washer and then securely tightened. Torque blade mounting capscrew to 50 to 70 ft. lbs. (67 to 95 N.m).

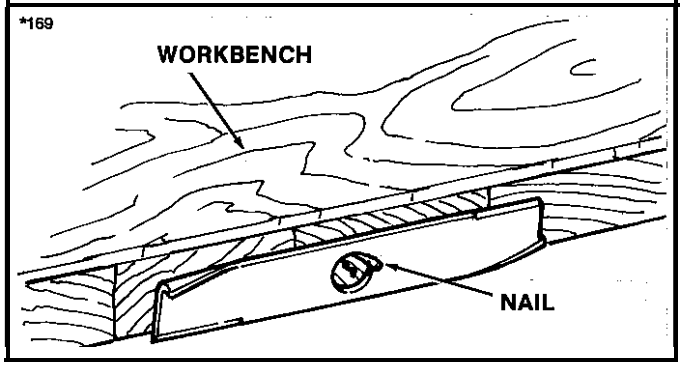

Figure 26. Balancing the Blade

6. Reinstall each blade with the tabs pointing up toward deck as shown in figure 29. Secure with a capscrew (D), cup washer (C), and spline washer (B). Be sure spline washer hub fits inside blade mounting hole. Use a wooden block to prevent blade rotation (figure 29) and torque capscrews from 50 to 70 ft. lbs. (67 to 95 N.m).

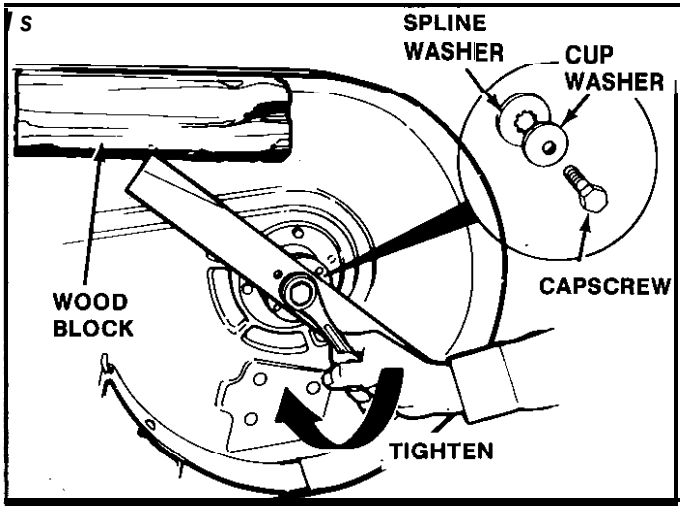

Figure 29. Installing the Blade

A. Wooden Block
B. Spline Washer
C. Cup Washer
D. Capscrew

Storage

NORMAL STORAGE

Clean all grass and dirt from the mower. To protect your tractor, store it in an enclosed dry area. Do not store it in an enclosure where fumes from **the fuel** tank could reach an open flame. Clean the seat with a vinyl cleaner.

To store your tractor in a cold area between winter snow removal jobs, we suggest that you fill the fuel tank at the completion of each job to prevent water condensation in the fuel tank. Wait for engine to cool before filling tank.

OFF-SEASON STORAGE (TWO MONTHS OR MORE)

1. Prepare the mower for storage as follows:
   a. Remove mower from tractor.
   b. Clean underside of mower.
   c. Coat all bare metal surfaces with oaint or liaht coat of oil to prevent rusting.
   d. Clean, sharpen and balance the blades.
2. Add a gasoline stabilizer to the tank.

A WARNING

Gasoline is highly flammable. Keep open flame or spark away from gasoline and fuel tank. Never store tractor where gasoline fumes may reach an open flame or spark.

3. Drain crankcase oil while engine is hot and refill with a grade of oil that will be required when tractor is used again.
4. Remove spark plug. Pour one ounce of 1 OW-30 oil into engine through spark plug hole. Crank engine a few times to distribute oil and then reinstall the spark plug.

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5. Clean any dirt or grass from cylinder head cooling fins and engine housing and clean air cleaner element.
6. Cover air cleaner and exhaust outlet tightly with plastic or otherwaterproof material to keep moisture, dirt and insects out of engine
7. Completely grease and oil tractor as outlined in earlier part of this section.
8. Clean up tractor and apply paint or rust preventive to any areas where paint is chipped or damaged.
9. Be sure the battery is filled to the proper level with water and is fully charged. Battery life will be increased if it is removed and put in a cool, dry place and fully charged about once a month. If battery is left in tractor, disconnect the negative cable.
10. If the tractor is to be stored 8 months or longer block the tractor up off the wheels to relieve weight and keep the tires off a damp floor. Protect the tires from prolonged exposure to direct sunlight.
11. Store the tractor in a dry place indoors.

STARTING AFTER STORAGE

Before starting the tractor after it has been stored, do the following:

1. Remove the blocks from under the tractor.
2. Install the battery (ii removed).
3. Unplug the exhaust outlet and air cleaner.
4. Remove spark plug and wipe it dry. Crank the engine a few times to blow excess oil out of the plug hole. Reinstall plug.
5. Fill fuel tank with fresh gasoline. See engine manual for recommendations.
6. Check crankcase oil level, and add proper oil if necessary.
7. Inflate tires to proper operating pressure. Check fluid levels.
8. Start the engine and let it run slowly. DO NOT run at high speed immediately after starting. Be sure to run engine only out of doors or in well ventilated area.

Troubleshooting & Repair

SECTION CONTENT

This section of the manual provides troubleshooting and repair instructions for the more common and easily corrected problems. For other problems, it is recommended that you contact your dealer.

A WARNING

To avoid serious injury, Perform maintenance on the tractor or mower only when the engine is stopped and the parking brake engaged. Always remove the ignition key, disconnect spark plug wire and fasten away from the plug before beginning the maintenance to prevent accidental starting of the engine.

. TROUBLESHOOTING PROCEDURES

To use these procedures, first locate the problem description that best describes the trouble that you have encountered. Check the possible causes one at a time in the order that they are listed.

1. Engine will not start.

A. Ground speed control lever not in neutral start position. Shift into NEUTRAL.

B. Clutch/brake pedal not fully depressed. Depress fully.

C. Operator not seated. Operator must be in seat on models equipped with seat switch.

D. Out of fuel. Refill fuel tank.

E. Engine flooded. Move control out of choke & attempt to start.

F. Circuit breaker tripped. Wait one minute for automatic reset. Replace if defective (see your dealer).

G. Battery terminals require cleaning. See Normal Care section.

H. Battery discharged or dead. Recharge or replace.

I. Wiring loose or broken. Visually check wiring & replace broken or frayed wires. Tighten loose connections.

J. Solenoid or starter motor faulty. Repair or replace.

K. Safety interlock switch faulty. Replace if needed. (See your dealer.)

L. PTO clutch lever not disengaged. Disengage fully.

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M. Spark plug faulty, fouled, or incorrectly gapped. Clean & gap or replace.

N. Water in fuel tank. Drain fuel &refill with fresh fuel.

0. Old stale gas. Drain fuel & replace with fresh fuel.

2. Engine starts hard or runs poorly.

A. Fuel mixture too rich. Move control out of choke. If problem still exists, clean air filter.

B. Carburetor adjusted incorrectly. See your engine manual.

C. Spark plug faulty, fouled, or incorrectly gapped. Clean and gap or replace.

3. Engine knocks.

A. Low oil level. Check/add oil as required.

B. Using wrong grade oil. See Engine Manual.

4. Excessive oil consumption.

A. Engine running too hot. Clean engine fins, blower screen and air cleaner. See Normal Care section.

B. Using wrong weight of oil. See Engine Manual.

C. Too much oil in crankcase. Drain excessive oil.

5. Engine exhaust is black or smoky.

A. Dirty air filter. Clean air filter.

B. Choke not fully open. Move control out of choke and be sure choke opens fully. If problem still exists, check carburetor adjustment.

6. Engine runs, but tractor will not drive or lacks power.

A. Ground speed control lever in NEUTRAL. Shift into forward or reverse gate.

B. Drive belt slips. (See problem and cause below.)

C. Check hydro transmission oil (hydro models).

D. Brake is not fully released.

E. Transmission release lever is not fully in drive position (hydro models). See Pushing The Tractor By Hand.

7. Drive belt slips.

A. Clutch or belt tension is out of adjustment. See Adjustment section.

B. Pulleys or belt greasy or oily. Clean as required.

C. Belt stretched or worn. Replace with correct belt.

D. Clutch rod binding in guide. Oil clutch rod. See Tractor Lubrication.

8. Brake will not hold.

A. Brake is incorrectly adjusted. See Adjustment section.

B. Brake pads worn & require replacement. See your dealer.

9. Tractor handles poorly.

A. Steering linkage is loose. Check and tighten any loose connections.

B. Improper tire inflation. Check and correct.

C. Wheels are spinning and slipping. Use weights to provide additional stability and traction.

D. Moving too fast on slopes. Reduce speed.

10. Main tractor drive belt does not stop when clutch-brake pedal is depressed.

A. Belt stop out of adjustment. See Adjustments section.

B. Belt tension out of adjustment. See Adjustments section.

11. Tractor will not move with ground speed control lever in forward or reverse.

A. Brake is not fully released. See Brake Adjustments.

B. Transmission release lever is not fully in drive position (hydro models). See Pushing The Tractor By Hand.

12. Oil is leaking from the breather cap during normal operation (hydro models, Mfg. Nos. 1692259, 1692263).

A. Cooling fins are obstructed by grass clippings or dirt.

B. The brake is stuck or not fully released. See Brake Adjustments - Hydro Models.

TROUBLESHOOTING (MOWER)

1. Mower will not raise.

A. Lift chain not attached or broken. Attach or repair.

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2. Uneven cut.

A. Tractor tires not inflated equally or properly.

B. Mower not leveled properly. See leveling adjustment in Mower Adjustment section.

3. Mower cut is rough looking.

A. Engine speed too slow. Set for three-fourths to full speed.

B. Tractor ground speed too fast. Use lower gear.

C. Blades dull & require sharpening. See Normal Care section.

D. Mower drive belt slipping. Belt oily or worn. Clean or replace belt as necessary. Readjust belt tension.

4. Engine stalls easily with mower engaged.

A. Tractor ground speed too fast. Use lower gear.

B. Engine speed too slow. Set for three-fourths to full speed.

C. Cutting height set too low when mowing tall grass. Cut tall grass at maximum cutting height during first pass.

D. Discharge chute jamming with cut grass. Cut grass with discharge pointing toward previously cut area.

5. Excessive mower vibration.

A. Blade mounting screws are loose. Torque to 50 ▪ 70 ft. lbs. (74 N.m). See Normal Care section.

B. Mower blades, arbors, or pulleys are bent. Check and replace as necessary.

C. Mower blades are out of balance. Remove, sharpen, and balance blades (see Normal Care section).

6. Excessive belt breakage.

A. Belt tension too tight. Readjust belt tension.

B. Bent or rough pulleys. Repair or replace.

C. Using incorrect belt. See your dealer.

7. Mower drive belt slips or fails to drive.

A. Mower drive belt out of adjustment. See Adjustment section.

B. Mower drive belt broken. Replace belt.

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CHECKING THE BATTERY

The voltmeter can be used to determine condition of battery. When engine is off, the voltmeter shows battery voltage, which should be 12 volts. When engine is running, the voltmeter shows voltage of charging circuit which normally is 13 to 14 volts.

A dead battery or one too weak to start the engine may not mean the battery needs to be replaced. It may, as an example, mean that the alternator is not charging the battery properly. If *there* is any doubt about the cause of the problem, see your dealer. If you need to replace the battery, follow the steps under "Cleaning the Battery & Cables" in the Normal Care Section.

CHARGING A COMPLETELY DISCHARGED BATTERY

1. Be aware of all the safety precautions you should observe during the charging operation. If you are unfamiliar with the use of a battery charger and hydrometer; have the battery serviced by your dealer.

A WARNING

Do not attempt to charge a frozen battery. Allow the battery to warm to 60" F (15.5" C) before placing on charge.

2. Add water sufficient to cover the plate (fill to the proper level near the end of the charge). If the battery is extremely cold, allow it to warm before adding water because the water level will rise as it warms. Also, an extremely cold battery will not accept a normal charge until it becomes warm.
3. Always unplug *or* turn the charger off before attaching or removing the clamp connections.
4. Carefully attach the clamps to the battery in proper polarity (usually red to [+] positive and black to [-] negative).

A CAUTION

Keep open flames and sparks away from the battery; the gasses coming from it are highly explosive. Ventilate the battery well during charging.

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5. While charging, periodically measure the temperature of the electrolyte. If the temperature exceeds 125" F (51.6" C), or if violent gassing or spewing of electrolyte occurs, the charging rate must be reduced or temporarily halted to prevent battery damage.

6. Charge the battery until fully charged (i.e. until the specific gravity of the electrolyte is 1.250 or higher and the electrolyte temperature is at least 60" F). The best method of making certain a battery is fully charged, but not over charged, is to measure the specific gravity of a cell once per hour. The battery is fully charged when the cells are gassing freely at low charging rate and less than 0.003 change in specific gravity occurs over a three hour period.

JUMP STARTING WITH AUXILIARY (BOOSTER) BATTERY

Jump starting is not recommended. However, if it must be done, follow these directions. Both booster and discharged batteries should be treated carefully when using jumper cables. Follow exactly the procedure that follows, being careful not to cause sparks. Refer to figure 30.

WARNING

For your personal safety, use extreme care when jump starting. Never expose battery to open flame or electric spark-battery action generates hydrogen gas which Is flammable and explosive. Do not allow battery acid to contact skin, eyes, fabrics, or painted surfaces. Batteries contain a sulfuric acid solution which can cause serious personal injury or property damage.

1. Both batteries must be of the same voltage (6, 12, etc.).

2. Position the vehicle with the booster battery adjacent to the vehicle with the discharged battery so that booster cables can be connected easily to the batteries in both vehicles. Make certain vehicles do not touch each other.

3. Wear safety glasses and shield eyes and face from batteries at all times. Be sure vent caps are tight. Place damp cloth over vent caps on both batteries.

4. Connect positive (+) cable to positive post of discharged battery (wired to starter or solenoid).

(Continued on next page)

5. Connect the other end of same cable to same post marked positive (t) on booster battery.
6. Connect the second cable negative (-) to other post of booster battery.
7. Make final connection on engine block of stalled vehicle away from battery. Do not lean *over* batteries.
6. Start the engine of the vehicle with the booster battery. Watt a few minutes, then attempt to start the engine of the vehicle with the discharged battery.
9. If the vehicle does not start after cranking for thirty seconds, STOP PROCEDURE. More than thirty seconds seldom starts the engine unless some mechanical adjustment is made.
10. After starting, allow the engine to return to idle speed. Remove the cable connection at the engine or frame. Then remove the other end of the same cable from the booster battery.

il. Remove the other cable by disconnecting at the discharged battery first and then disconnect the opposite end from the booster battery.

12. Discard the damp cloths that were placed over the battery vent caps.

A WARNING

To avoid engine damage, do not disconnect battery while engine is running. Be sure terminal connections are tight before starting.

A WARNING

Any procedure other than the preceding could result in: (I) personal injury caused by electrolyte squirting out the battery vents, (2) personal injury or property damage due to battery explosion, (3) damage to the charging system of the booster vehicle or of the immobilized vehicle.

Do not attempt to jump start a vehicle having a frozen battery because the battery may rupture or explode. if a frozen battery is suspected, examine ail fill vents on the battery. if ice can be seen or if the electrolyte fluid cannot be seen, do not attempt to start with jumper cables as long as the battery remains frozen.

Adjustments

SEAT ADJUSTMENT

⚠ WARNING

To avoid serious injury, perform adjustments only with engine stopped, key removed and tractor on level ground.

Raise the seat deck. While holding the seat, loosen the four capscrews (A, figure 31) securing seat to deck. Position the seat as desired, then tighten the capscrews.

Seat springs **(B,** figure 31) can be adjusted for operator comfort. Move springs forward for lighter operator and toward the rear for heavier operator.

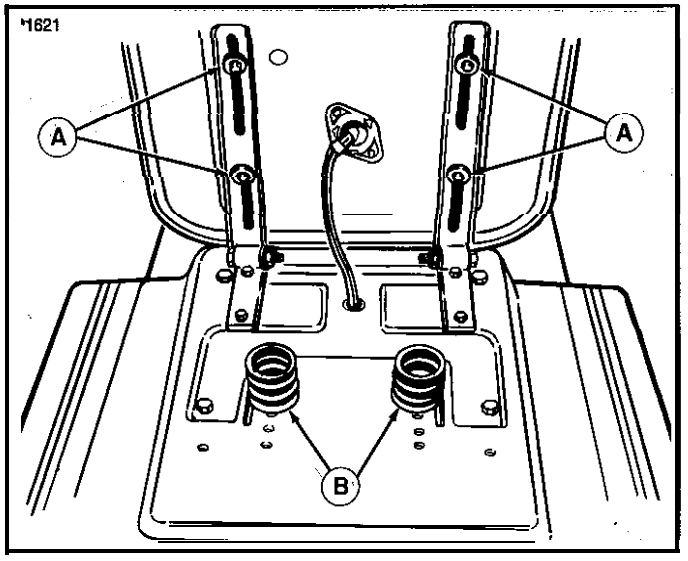

Figure 31. Seat Adjustment
A. Capscrews **B. Springs**

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BRAKE ADJUSTMENTS ▪ HYDRO MODELS

Parking Brake Adjustment

For hydro models (Mfg. Nos. 1692156, 1692164), refer to figure 32. For other hydro models, refer to figure 33.

1. With parking brake released, rotate the brake cam (A) forward until it stops. There should be gap between transaxle housing (B) and rear point of brake cam as shown in the figure.
2. If adjustment is required, remove cotter pin and turn adjusting nut (C) until proper clearance is achieved. Turning the nut in will decrease clearance and turning the nut out will increase clearance. Reinstall cotter pin after adjustment.

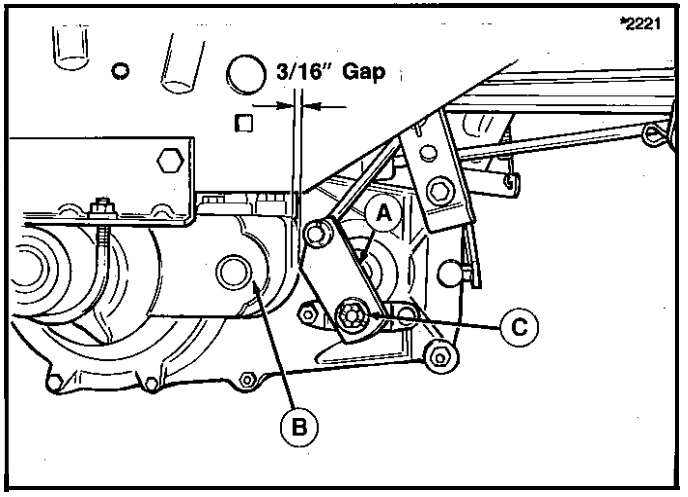


Figure 32. Parking Brake Adjustment ▪ Hydro Models (Mfg. Nos. 1692156, 1692164) (Viewed from right side of transaxle with rear wheel removed)
A. Brake Cam
B. Trsnsaxle Housing
C. Adjusting Nut

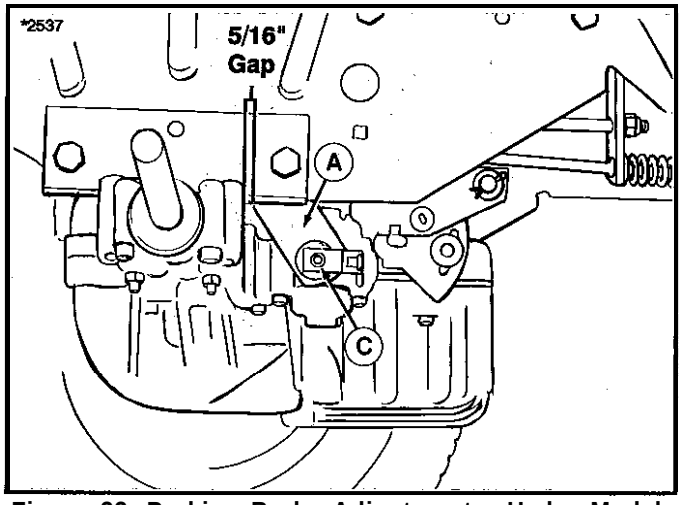


Figure 33. Parking Brake Adjustment - Hydro Models (Mfg. Nos. 1692259, 1692263) (Viewed from left side of transaxle with rear wheel removed)
A. Brake Cam
B. Transaxle Housing
C. Adjusting Nut

Brake Spring Adjustment

For **hydro** models (Mfg. Nos. **1692156, 1692164),** refer to figure 34. For other hydro models, refer to figure 35.

1. Depress the clutch/brake pedal and latch parking brake over footrest. When compressed, measure the brake spring (A) between the rod guide (B) and adjusting nut (C). Measurement should be as shown.
2. If adjustment is required, turn adjusting nut (C) until proper spring length is achieved.

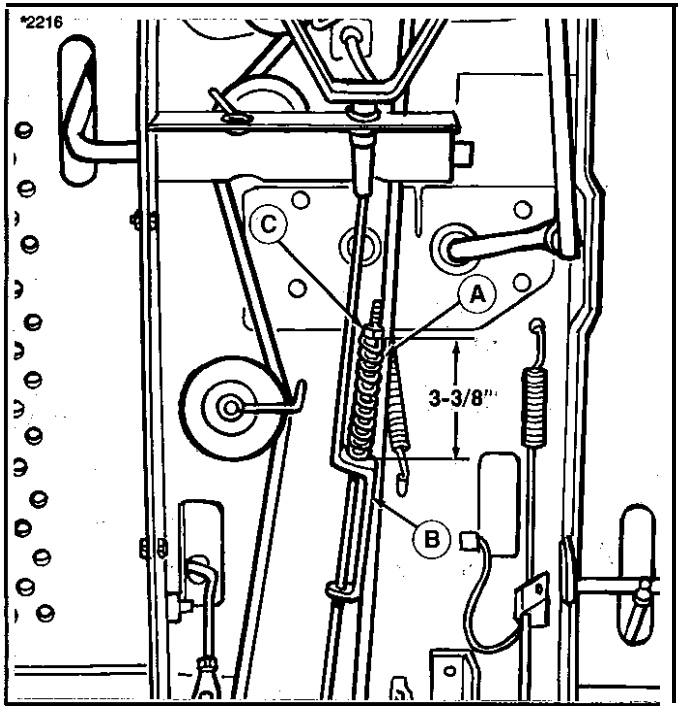


Figure 34. Brake Spring Adjustment - Hydro Models (Mfg. Nos. 1692156, 1692164)
A. Brake Spring
B. Rod Guide
C. Adjusting Nut

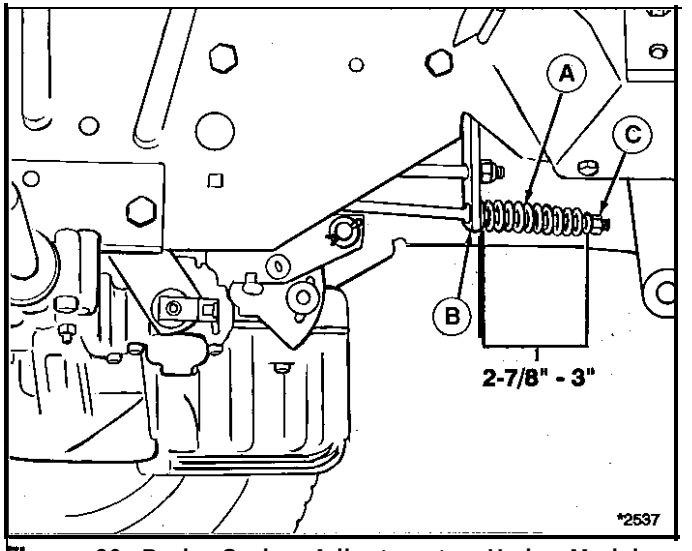
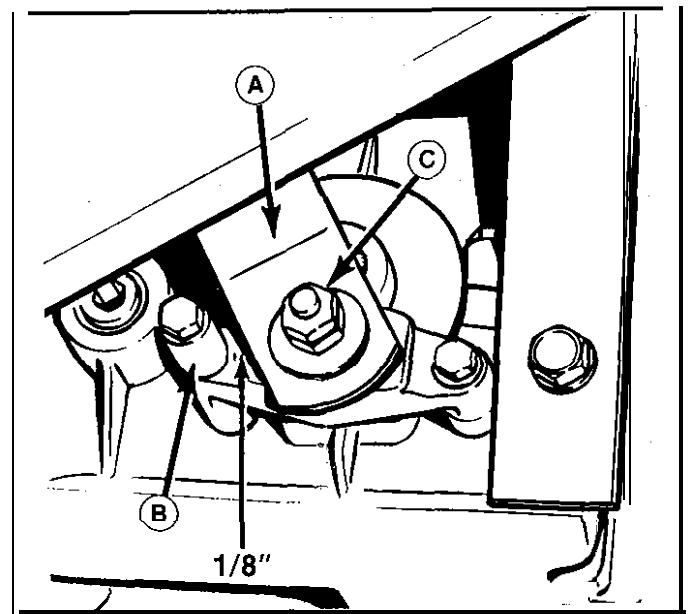


Figure 36. Brake Spring Adjustment - Hydro Models (Mfg. Nos. 1692259, 1692263)
A. Brake Spring
B. Rod Guide
C. Adjusting Nut

BRAKE ADJUSTMENTS - GEAR MODEL

Parking Brake Adjustment

1. Place the transmission in gear and release the parking brake.
2. Move the brake rod (l, figure 37) back and forth to be sure there is no tension on the brake pads.
3. See figure 36. Push the cam lever (A) forward (toward front of tractor) to remove any slack. The gap between cam lever (A) and stop (B) should be 1/8" (0.3mm). Use a feeler gauge to measure.
4. If adjustment is required, loosen or tighten the adjustment nut (C) to achieve correct dimension. Some models are equipped with two nuts. If so, loosen the outer nut, adjust the inner nut as necessary, then tighten the outer nut.



igure 36. Parking Brake Adjustment-Gear Model
/iewed from right side of transmission)
. Brake Cam Lever
. stop
. Adjustment Nut

Brake Spring Adjustment

1. Make sure the brake cam lever is properly adjusted as described previously under Parking Brake Adjustment.
2. Fully depress clutch pedal and lock parking brake.
3. See figure 37. Adjust the brake rod nut (A) until spring (D) is compressed to **2-11/32"** length.

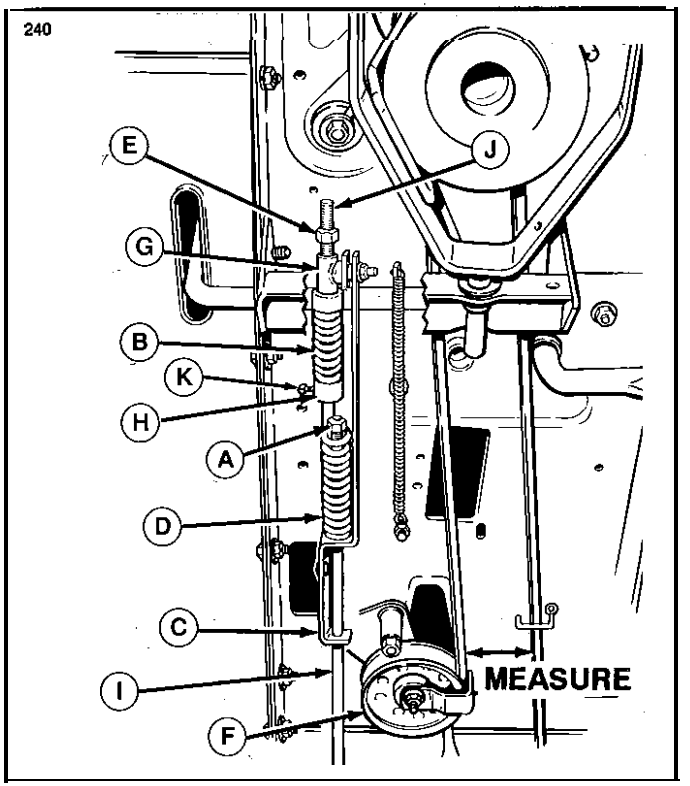


Figure 37. Clutch/Brake Adjustments - Gear Model

A. Nut
B. Spring, Clutch Rod
C. Brake Rod Guide
D. Spring, Brake Rod
E. Nut
F. Idler Pulley, Rear
G. Clutch Rod Guide
H. Set Collar
I. Brake Rod
J. Clutch Rod
K. Setscrew

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CLUTCH ROD ADJUSTMENT ▪ GEAR MODEL

Refer to figure 37.

1. Release clutch/brake pedal so parking brake is not locked.
2. Apply 15-20 lbs. pressure to pedal to firmly seat transmission drive belt in idler pulley (F). Measure the distance between the inside belt strands as shown in figure 37. Distance should be between 2-3/4" and 3-3/8".
3. If adjustment is required, loosen rear idler pulley (B, figure 56). Move rear pulley rearward to increase distance and move pulley forward to decrease distance.

NOTE: For smooth operation, the drive system is designed to allow some belt slippage at transmission drive pulley when clutch pedal is released. In the following adjustment, less belt slippage can *be obtained by slightly reducing* the *2-7/16" dimension.*

4. Make sure spring (B) is seated against rod guide (G) and set collar (H). Apply 15-20 lbs. pressure to pedal to position belt firmly in idler pulley.
5. Push set collar (H) against spring (B) to compress spring to 2-7/16" and tighten setscrew. Release idler pulley and check dimension.
6. If adjustment is required, apply parking brake, loosen setscrew (K), reposition set collar (H) and tighten setscrew(K). Release parking brake and check dimension. Repeat until 2-7/16" dimension is achieved.
7. Measure distance between rod guide (G) and nut (E). Distance should be 5/8". turn nut as required to correct distance.

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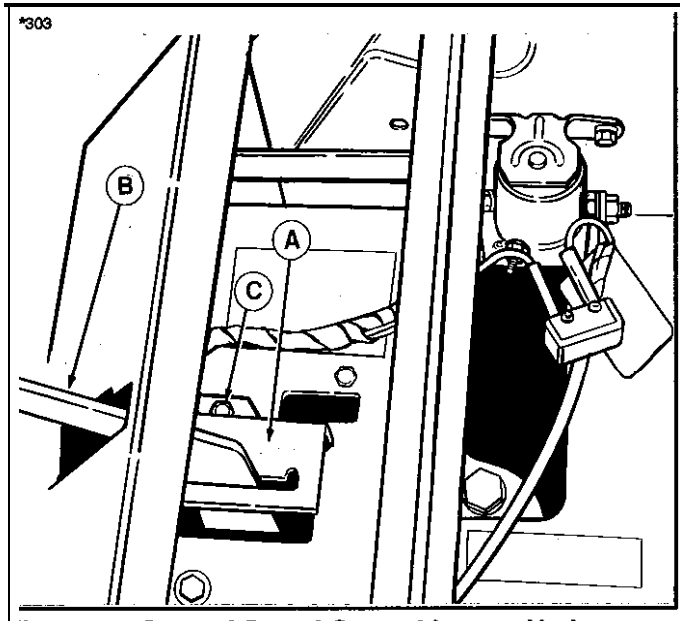
NEUTRAL ADJUSTMENT - HYDRO MODELS (Mfg. Nos. 1692156, 1692164)

If the tractor creeps forward or backward with ground control speed lever positioned in the neutral gate, perform the following adjustment.

1. Raise rear of tractor off ground with suitable hoist or *floor* jack. install jackstands underneath transexle and block the front wheels.
2. See figure 38. Raise the seat deck. The control lever quadrant (A) is mounted with slotted holes so it can be adjusted. Loosen the two self-tapping screws (C) and move the quadrant so the screws are centered in the quadrant slots. Tighten the screws securely.
3. Place speed control lever (B) in the NEUTRAL gate. Start the engine and run at maximum RPM.



igure 38. Ground Speed Control Lever - Hydro lodels (Mfg. Nos. 1692156, 1692164)
. Quadrant
. Ground Speed Control Lever
. Taptite Screw

(Continued on next page)

4. See figure 39. Loosen jam nut (B) and adjust control link length by rotating nut (A) in either direction until wheels stop rotating. Snug jam nut (B) finger tight against nut (A).

5. Check for neutral from forward and *reverse* with ground speed control lever (B, figure 38). Repeat steps 3 - 4 if necessary.

8. Hold the adjustment nut (A) and tighten jam nut (B) securely against nut (A)

7. Shut off the engine and remove tractor from jackstands or jack.

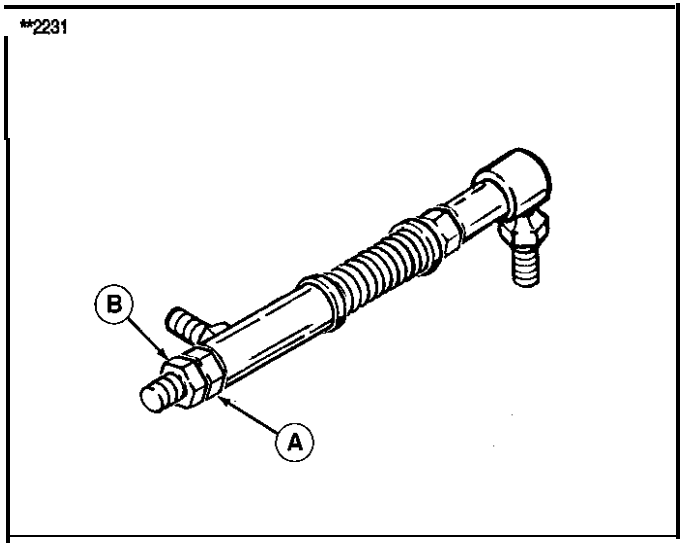
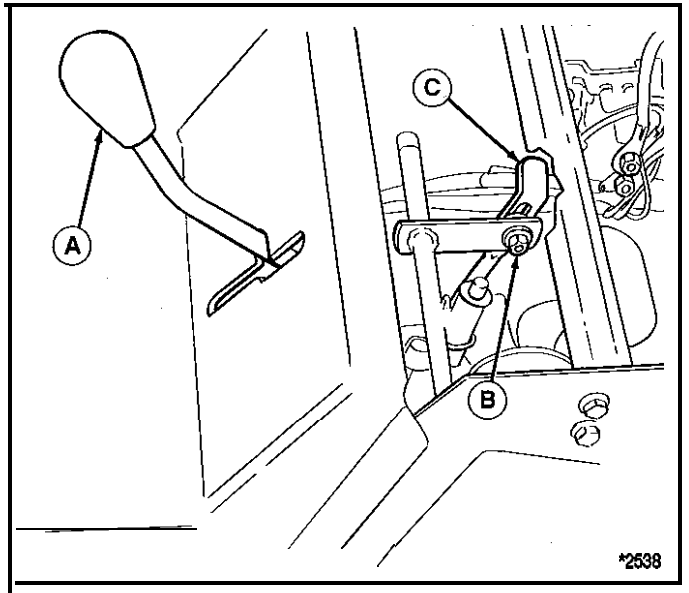


Figure 39. Control Linkage - Hydro Models (Mfg. Nos. 1692156, 1692164)

NEUTRAL ADJUSTMENT ▪ HYDRO MODELS (Mfg. Nos. 1692259, 1692263)

If the tractor creeps forward or backward wlth ground control speed lever positioned in the neutral gate, perform the following adjustment.

1. Raise rear of tractor off ground with suitable hoist or floor jack. Install jackstands underneath transaxle and block the front wheels.
2. See figure 40. Place speed control lever (A) in the NEUTRAL gate. Start the engine and run at maximum RPM.
3. Raise the seat deck. Loosen nut (B) and adjust linkage rod (C) up or down until wheels stop rotating, then tighten nut (B) securely.
4. Turn off the engine and remove tractor from jack stands or jack.



gure 40. Ground Speed Control Lever ▪ Hydro odels (Mfg. Nos. 1692259, 1692263)

Ground Speed Control Lever
B. Nut
C. Linkage Rod

RETURN-TO-NEUTRAL ADJUSTMENT ▪ HYDRO MODELS (Mfg. Nos. 1692259, 1692263)

1. Depress **clutch/brake** pedal fully. Ground speed control lever should return to the neutral gate.
2. **Turn** nut in either direction until proper adjustment is achieved and control lever returns fully to the neutral gate.

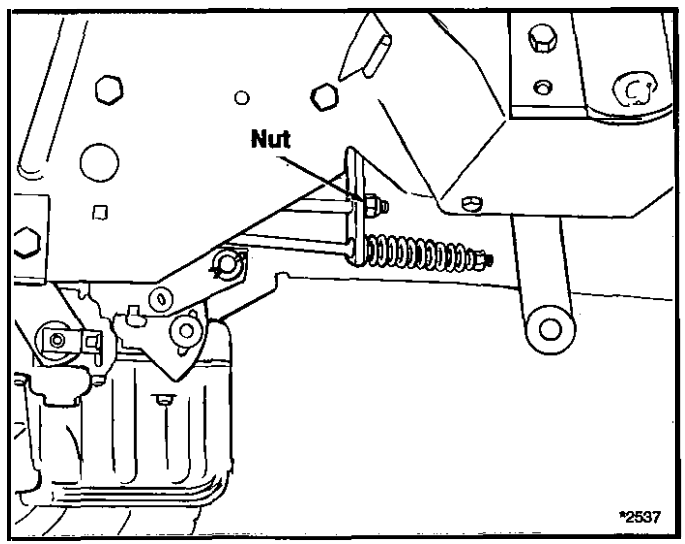


Figure 41. Return-To-Neutral Adjustment ▪ Hydro Models (Mfg. Nos. 1692259, 1692263) (Viewed from right side of transaxle with the rear wheel removed)

ENGINE PULLEY BELT STOP

There should be 1/8" (3mm) between each belt stop and the belt when the tractor clutch is engaged (pedal up). See figure 42.

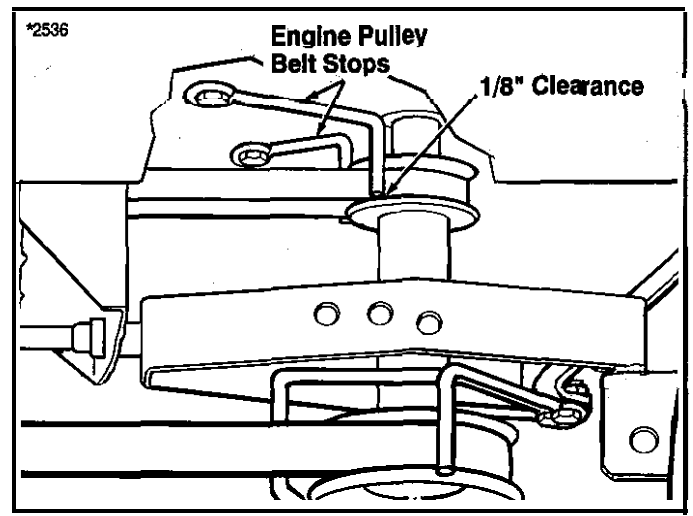


Figure 42. Engine Pulley Belt Stops

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SMALL LIFT LEVER-STANDARD

The small lift lever is standard equipment on your tractor and is used to raise and the ***lower*** the mower deck for transporting.

1. See figure 43. Use the mower height control lever (A) to place the mower in the lowest cutting position. Use the small lift lever (B) to fully raise the mower to the transport position.
2. Measure the distance between top of upstop bracket (C) and top of footrest. Measurement should be 3-3/8".
3. See figure 44. If adjustment is required, disconnect clevis (A) from the chain (B). Loosen nut (C) and turn clevis to raise or lower mower. When measurement is correct, tighten nut (C) against clevis (A).

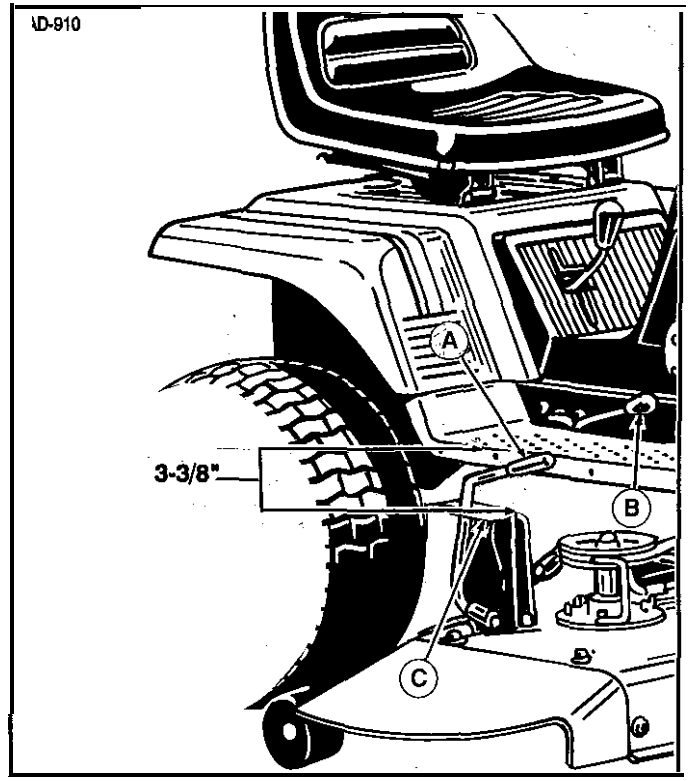

Figure 43. Small Lift Lever Measurement
A. Mower Height Control Lever C. Upstop Bracket
B. Small Lift Lever

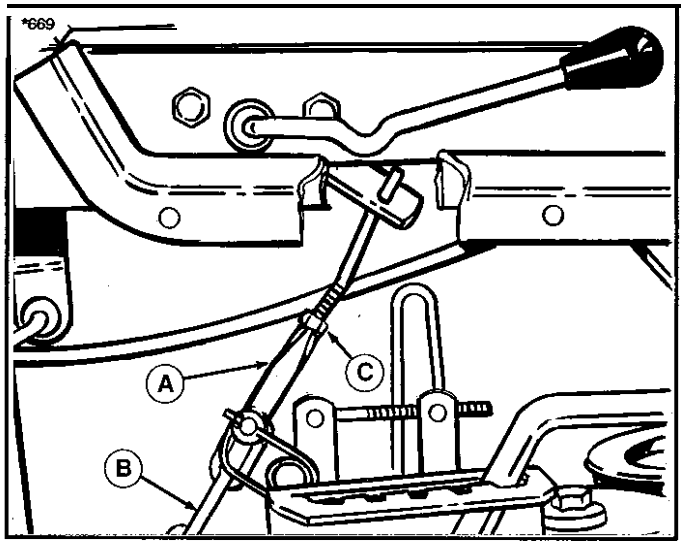

Figure 44. Lift Assembly Adjustment
A. Clevis **C. Nut**
B. Chain

LARGE LIFT LEVER - OPTIONAL

The large lift lever is optional, but is required with some attachments. It is used to raise and the lower the mower deck or attachments for transporting.

1. See figure 45. Use the mower height control lever (A) to place the mower in the lowest cutting position. Use the large lift lever (B) to fully raise the mower to the transport position.
2. Measure the distance from bottom edge of lever bracket (C) to mower deck as shown in figure 45. Measurement should be **5".**
3. See figure 44. If adjustment is required, disconnect clevis (A) from the chain (B). Loosen nut (C) and turn clevis to raise or lower mower. When measurement is correct, tighten nut (C) against clevis (A).

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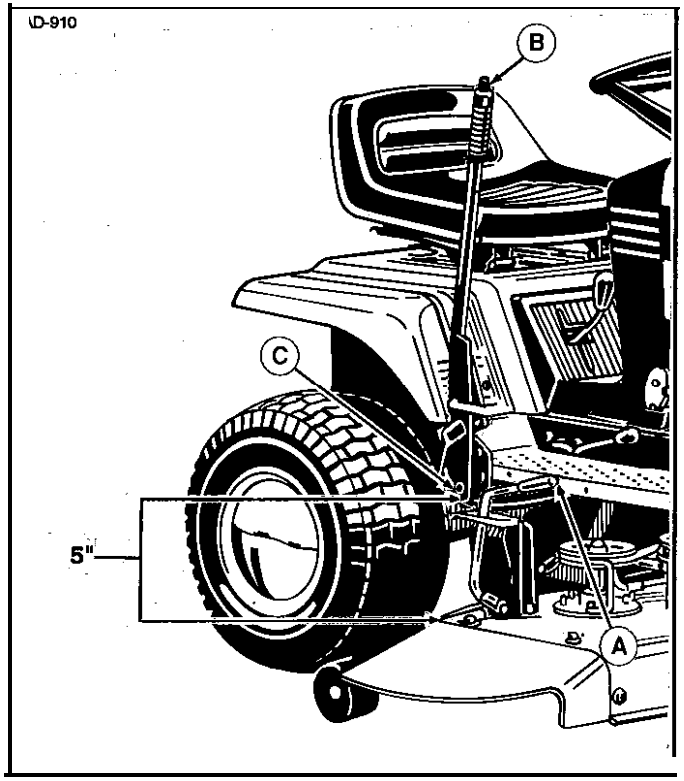

Figure 45. Large Lift Lever Measurement
A. Mower Height Control Lever
B. Large Lift Lever
C. Lever Bracket

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MOWER ADJUSTMENTS

⚠ WARNING

To prevent accidental starting, remove the ignition key, then disconnect the spark plug wire and fasten it away from the spark plug.

Leveling The Mower

if the cut is uneven, the mower may need leveling. Unequal or improper tire pressure may also cause an uneven cut. Tire pressure should be as follows:

Front: 12 - 15 psi (82-l 03 kPa)
Rear: 6 - 8 psi (41-55 kPa)

1. With the mower installed, place the tractor on a smooth, level surface such as a concrete floor. Turn the front wheels straight forward.
2. Check for bent blades and replace if necessary.
3. Disengage the PTO. Arrange the mower blades so that they are both pointing from side-to-side, then engage the PTO.
4. Measure the distance between the outside tips of each blade and the ground. If there is more than 1/8" (3mm) difference between the measurements on each side, proceed to step 5. If the difference is 1/8" (3mm) or less, proceed to step 6.
5. See figure 46. Remove the cotter pin (A) which secures the mower leveling rod (B). Shorten the rod to raise the left side of the mower, Lengthen the rod to lower the left side of the mower. After making adjustment, insert the leveling rod into the hole and re-check the measurements. if the mower is level, install the cotter pin (A).
6. Disengage the mower PTO. Arrange the blades so they face front-to-back, then engage the PTO.
7. Measure the distance to the ground from the front tip of the left blade and the rear tip of the right blade. The measurements should be equal. if they are not, proceed with steps 8 and 9.

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8. Remove the clip pins (C) and clevis pins (D) from the hitch clevises (E). Turn each clevis an equal number of turns in the same direction. Shorten the hitch rods to raise the front of the mower, or lengthen the hitch rods to lower the front of the mower.

NOTE: One full turn of clevis will equal about 1/8".

9. After adjustment, attach clevises (E) to suspension arm (F) with clevis pins (D) and check the measurements. When the mower is level, reinstall the clip pins (C) and tighten nuts (G) against clevises.

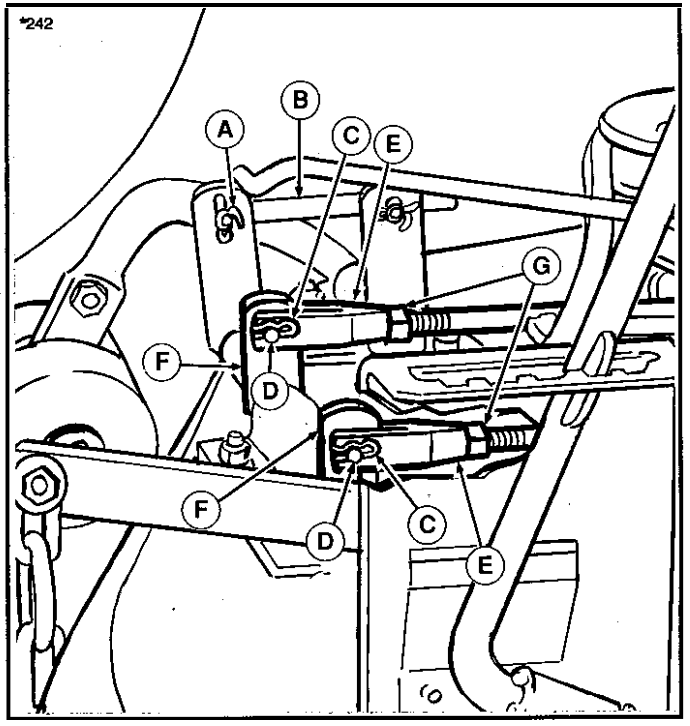

Figure 46. Leveling The Mower

A. Cotter Pin
B. Mower Leveling Rod
C. Clip Pin (2)
D. Clevis Pin (2)
E. Hitch Clevis (2)
F. Suspension Arm
G. Nut (2)

Mower Belt Tension

1. Lower the mower using the lift lever.
2. Place the mower in the highest cutting position using the mower height control lever.
3. Place the PTO lever in the engaged position,
4. See figure 47. The gap between the rod guide and the set collar should measure 3/8" - 1/2" (IO - 13mm).
5. If adjustment is required, disengage the PTO and loosen the setscrew. Move the rod forward to increase the gap or back to decrease the gap, then tighten setscrew.
6. Engage the PTO and check the measurement. Readjust if necessary.

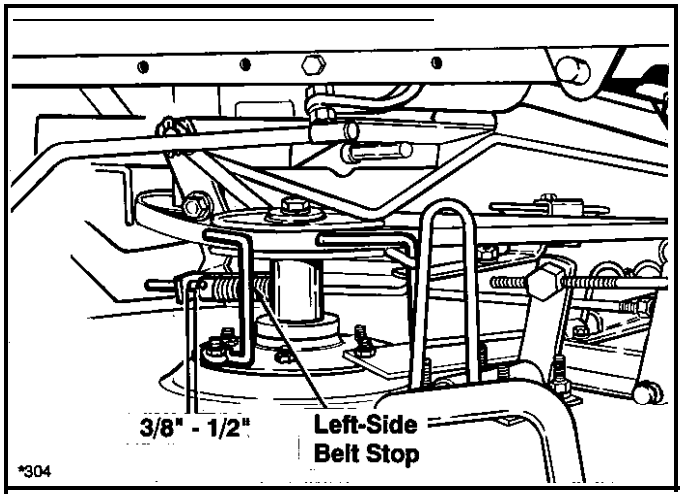

Figure 47. Mower Belt Tension (Viewed from left side of tractor)

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Arbor Belt Stops

1. The arbor belt stops are shown in figures 47 and 48. There should be 1/8" (3mm) clearance between the belt stops and belt when the PTO lever is engaged.

2. If adjustment is required, loosen nut (C) and reposition the belt stop, then tighten the nut.

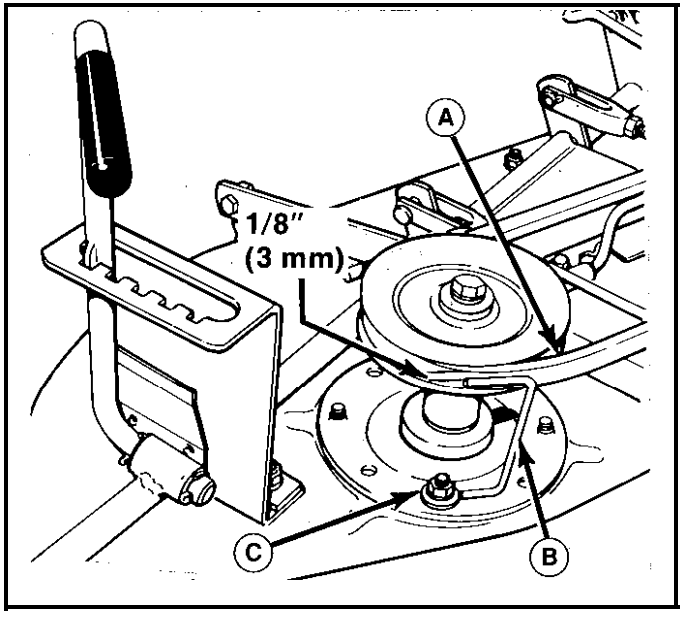

Figure 48. Right-Side Arbor Belt Stop
A. Belt
B. Belt Stop
C. Nut

Idler Pulley Belt Guide

1. See figure 49. The idler pulley belt guide (A) is correctly adjusted when its edge is 1/4" (6mm) from the rear edge of the idler arm (B) with the PTO disengaged.
2. If adjustment is required, loosen the nut (C) and move the belt guide. Tighten the nut and check the measurement.

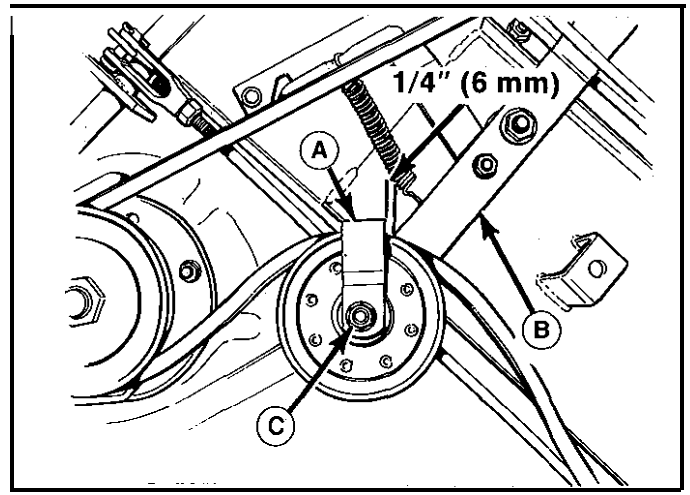

Figure 49. Idler Pulley Belt Guide
A. Belt Guide
B. Idler Arm
C. Nut

PTO Pulley Belt Stops

There are two belt stops at the PTO pulley: one on the left side (figure 50) and one on the right side (51).

1 .Wiih the PTO engaged, measure the distance between the belt stop and belt. The should be 1/16 (1.5mm) clearance between each belt stop and the belt.

2. If adjustment is required, loosen the belt stop mounting capscrew and move the belt stop to achieve proper measurement. Tighten the capscrew and check the measurement.

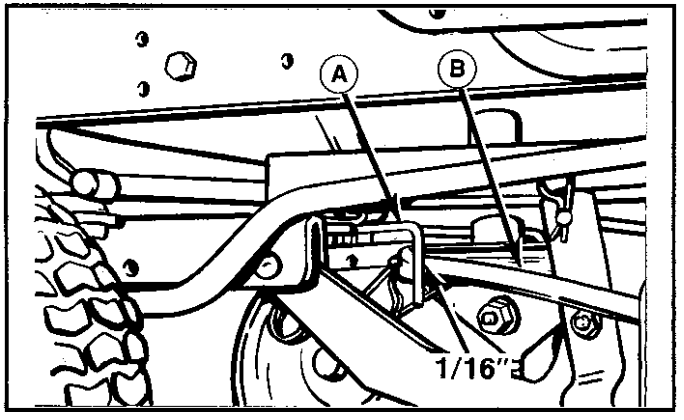

Figure 60. Left-Side PTO Pulley Belt Stop

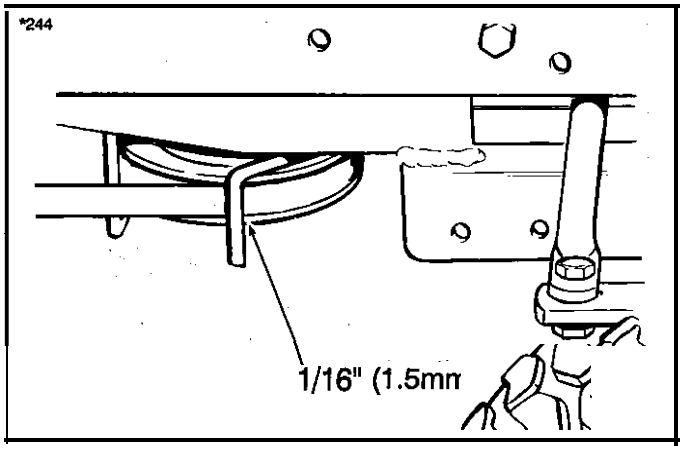

Figure 51. Right-Side PTO pulley Belt Stop

Blade Brake Adjustment

1. Inspect the mower deck with the mower attached and PTO disengaged.
2. The blade brake rods (A, B , figure 52) should firmly contact the belt (C) at the rear of the right and left arbor pulleys. There should be a slight clearance between the two brake rods at the center. The right brake rod (B) should be slightly closer (1/16" - 1/8") to belt than the left-hand brake rod (A).
3. If adjustment is required, loosenthe mounting brackets (D) and adjust rods for clearance. Tighten bracket bolts and check again.
4. Engage the PTO and be sure that brake rods are at least 1/8" from belts.

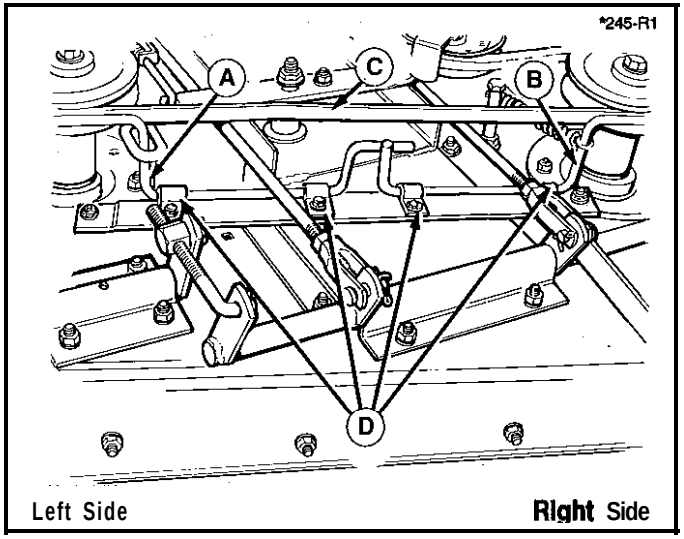

Figure 52. Blade Brake Adjustment
A. Left-Hand Brake Rod
B. Right-Hand Brake Rod
C. Belt
D. Mounting Brackets

Belt Replacement

A CAUTION
To avoid damaging belts, do not pry belts over pulleys.

TRACTOR DRIVE BELT - HYDRO MODELS (Mfg. Nos. 1692156, 1692164)

Refer to figure 53.

1. Park the tractor on a level surface. Disengage the PTO, turn off the engine and lock the parking brake. Remove the key.
2. Remove the mower from the tractor. See Mower Installation & Removal in the Operation section.
3. Disconnect the idler pulley spring (A) from the tractor frame.
4. Loosen the engine pulley belt stops (B) and PTO pulley belt stops (C).
5. Remove the tractor belt from the engine pulley (D) and let the belt rest on top of the PTO pulley (E).
6. Loosen the belt stop (F) on the flat pulley (G) and slip belt off pulley.
7. Loosen the nut (H) securing belt stop (I) and slip belt off idler pulley (J).
8. Loosen the nut (K) securing belt stop (L) and slip belt off flat idler pulley (M).
9. Loosen the belt stop (N) and slip the belt off the transmission pulley (0).
10. Remove the belt from tractor.
11. Install the new belt by reversing steps 1 - 9. Be sure the V side of belt is against all the pulleys except the flat idler pulleys (G and M).
12. Reinstall belt over idler pulley belt stop (I) and flat idler pulley belt stop (L). Tighten nuts and make sure pulleys can rotate freely after installation.
13. Perform all brake and belt stop adjustments. Make sure all belt stops are positioned 1/8" from belt.

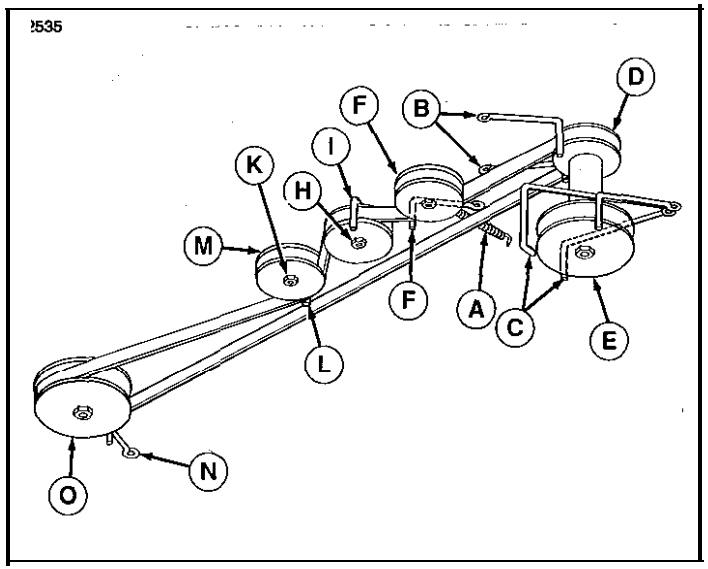

Figure 69. Drive Belt - Hydro Modal (Mfg. Nos. 1692156, 1692164)

A. idler Spring
B. Belt Stops, Engine Pulley
C. Belt Stops, PTO Pulley
D. Engine Pulley
E. PTO Pulley
F. Belt Stop, Flat idler Pulley
G. Fiat idler Pulley
H. Nut
I. Belt Stop, idler Pulley
J. Idler Pulley
K. Nut
L Belt Stop, Fiat idler Pulley
M. Fiat idler Pulley
N. Belt Stop, Transmission Pulley
0. Transmission Pulley

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TRACTOR DRIVE BELT ▪ HYDRO MODELS (Mfg. Nos. 1692259, 1692263)

Refer to figure 54.

1. Park the tractor on a level surface. Disengage the PTO, turn off the engine and lock the parking brake. Remove the key.
2. Remove the mower from the tractor. See Mower Installation & Removal in the Operation section.
3. Loosen the engine pulley belt stops (A) and PTO pulley belt stops (B).
4. Remove the tractor drive belt from the engine pulley (C) and let the belt rest on top of the PTO pulley (D).
5. Loosen the nut (E) securing the belt stop (F) and idler pulley (G). Slip the belt off the pulley.
6. Loosen the belt stop (J) and slip the belt off the transmission pulley (I).
7. Remove the belt from the tractor.
8. Install the new belt by reversing steps 1 ▪ 7. Be sure the V side of the belt is against all the pulleys except the flat idler pulley (H).
9. Reinstall belt on idler pulley (G) and tighten nut (E). Make sure pulley can rotate freely after installation.
10. Perform all brake and belt stop adjustments. Make sure belt stops are positioned 1/8" from belt.

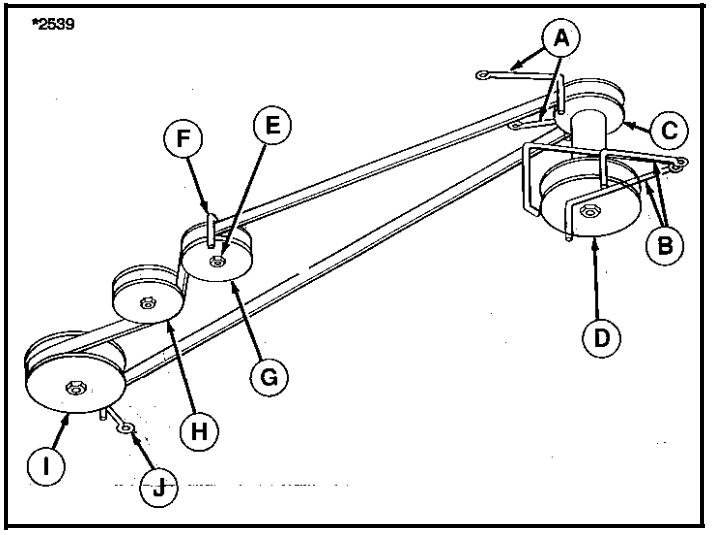

Figure 64. Drive Belt ▪ Hydro Models (Mfg. Nos. 1692259, 1692263)

A. Belt Stops, Engine Pulley
B. Belt Stops, PTO Pulley
C. Engine Pulley
D. PTO Pulley
E. Nut
F. Belt Stop, Idler Pulley
G. Idler Pulley
H. Flat Idler Pulley
I. Transmission Pulley
J. Belt Stop, Transmission Pulley

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TRACTOR DRIVE BELT - GEAR MODEL

Refer to figures 55 and 56.

1. Park the tractor on a level surface. Disengage the PTO, turn off the engine and set the parking brake. Remove the key.
2. Remove the mower from the tractor. See Mower Installation & Removal in the Operation section.
3. See figure 55. Remove the two capscrews (A), lockwashers (B) and nuts (C) securing the gear shift lever (D) to the transmission bracket (E).
4. Open the seat deck and remove capscrew (F), flat washer (G), spacer (H) and nut (I) securing gear shift lever (D) to the frame (J).

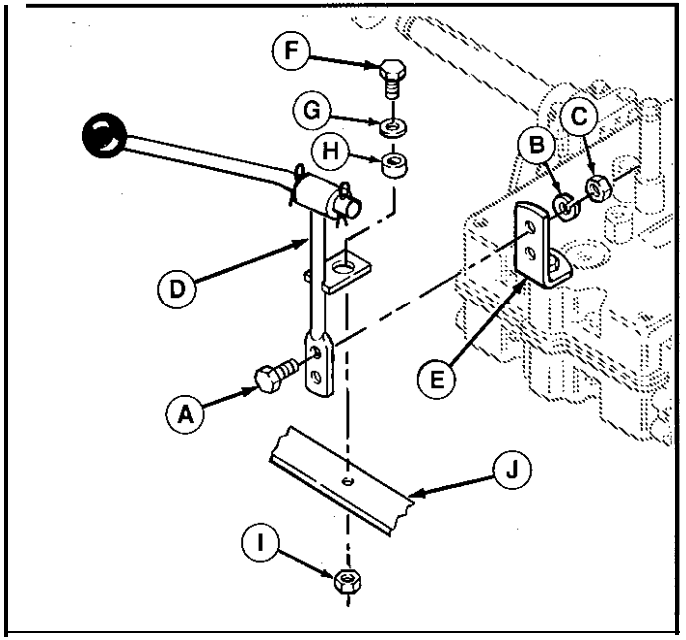


Figure 55. Shift Lever - Gear Model

A. Capscrew (2)	F. Capscrew
B. Lockwasher (2)	G. Flat Washer
C. Nut (2)	H. Spacer
D. Gear Shift Lever	I. Nut
E. Transmission Bracket	J. Frame

5. See figure 56. Loosen nut (A) securing rear idler pulley (B) and belt stop (C). Slide pulley forward to release belt tension and remove belt from idler pulley.

6. Loosen belt stops (D) on transmission pulley (E) Slip the belt over the rear idler pulley and transmission pulley, then down between transmission gear shift brackets.

7. Loosen nut (F) securing idler pulley (G) and belt stop (H). Slip belt off idler pulley (G).

9. Loosen the belt stops (I) from the engine pulley (J). Loosen belt stops (K) from the PTO pulley (L).

9. Install the new belt by reversing steps 1 - 8. Be sure the V side of the belt is against all the pulleys except the flat idler pulley (G).

10. Reinstall belt on idler pulleys (B and G) and tighten nuts (A and F). Make sure pulleys can rotate freely after installation. The rear idler pulley belt stop (C) is self-indexing when nut (A) is tightened.

11. Perform all brake and belt stop adjustments. Make sure belt stops (D) are positioned 1/8" from belt. See Clutch Rod Adjustment to adjust the rear idler pulley (B) position.

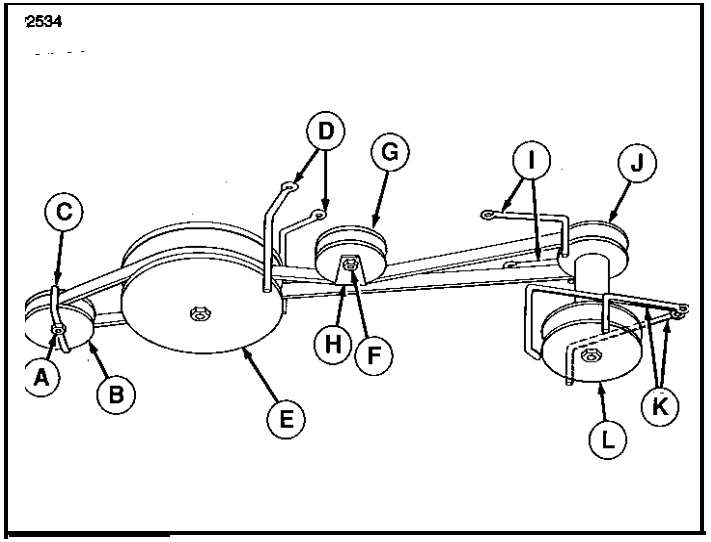


Figure 56. Drive Belt-Gear Model

A. Nut
B. Rear Idler Pulley
C. Belt Stop, Rear Idler Pulley
D. Belt Stops, Transmission Pulley
E. Transmission Pulley
F. Nut
G. Idler Pulley
H. Belt Stop, Idler Pulley
I. Belt Stops, Engine Pulley
J. Engine Pulley
K. Belt Stops, PTO Pulley
L PTO Pulley

MOWER BELT

Refer to figure 57.

1. Disengage the PTO and set the parking brake.
2. Remove the mower from the tractor. See Mower Installation & Removal in the Operation section.
3. Loosen the nut (A) on the idler pulley (B). Move and hold the idler arm (D) toward rear of mower deck to release blade brakes. Slip belt off left and right arbor pulleys.
4. Install the new belt on the pulleys as shown.
5. Reposition the belt guide (C) on the idler pulley (B). Before tightening the nut (A), position the belt guide so it is 1/4" (6mm) behind the idler arm (D) as shown in figure 57. Hold the belt guide in position when tightening nut.
6. Install the mower on the tractor. See Mower Installation & Removal in the Operation section. Check mower drive belt tension as outlined in the Adjustment section. Run the mower under no load condition for about 5 minutes. Recheck belt tension and blade brake adjustment after 1 hour of operation.

NOTE: Whenever changing mower belt tension, perform all other adjustments listed for the mower in the Adjustments section.

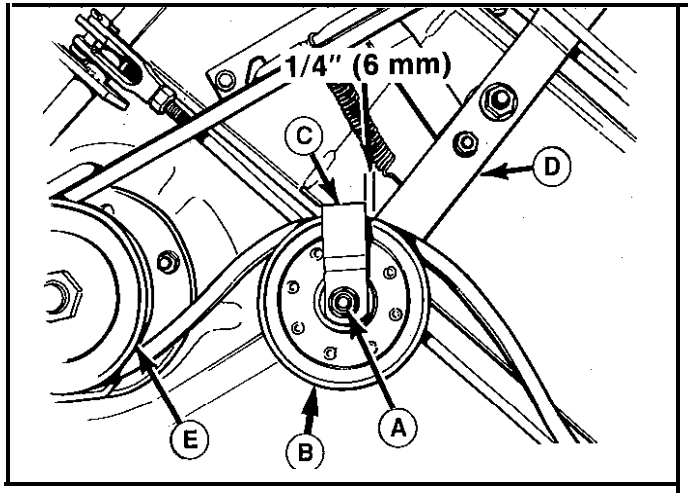


Figure 57.
A. Nut
B. idler Pulley
C. Belt Guide
D. idler Arm
E. Right Arbor Pulley

Specifications

ENGINE

Make:	Briggs & Stratton - 4 cycle air cooled
Model&Type:	See engine I.D. plate
Horsepower:	12.5 HP @ 3600 rpm (Eng. Mfg's. Rating)
Cylinder:	1 horizontal
Bore & stroke:	12.5 HP: 3.44 x 3.06 inches (67 x 76 mm)
Displacement:	12.5 HP: 26.4 cu. in. (465 cc)
Crankshaft:	Vertical, syncrobalanced
Battery:	12 volt 39 amp. hour
Governor:	Mechanical full throttle - no load setting @ 3400 ± 100 rpm; idle speed @ 1750 ± 200 rpm
Crankcase **Capacity:**	See engine manual
Ignition:	Electronic
Charging:	Unregulated 3-amp DC charging circuit
Air Cleaner:	Oil foam with reuseable polyurethane element
Fuel Tank:	2.2 gallons (6.3 liters) of "regular" grads leaded or nonleaded gasoline.
Starter:	12 volt electric gear drive

TRANSMISSION (Hydro)

Type:	Belt drive to hydrostatic transmission
Differential:	Gear reduction unit
Ground speeds @ 3400 rpm:	Forward - 0-4.8 mph Reverse. O-2.6 mph

TRANSMISSION (Gear)

Type:	Spur gear trans. w/5 speed forward & 1 reverse
Differential:	Bevel gear type
Ground speeds @ 3400 rpm:	1st gear - .9 mph (1.5 km/h) 2nd gear - 1.6 mph (2.9 km/h) 3rd gear - 2.6 mph (4.2 km/h) 4th gear - 3.7 mph (5.0 km/h) 5th gear - 4.0 mph (6.4 km/h) Reverse - 1.9 mph (3.4 km/h)

DIMENSIONS & WEIGHT

Height (at steering wheel):	39 in. (99 cm)
Wldth:	33.75 in. (66 cm)
Length:	65.25 in. (166 cm)
Clearance - Front Axle:	9 in. (226 mm)
Clearance - Transmission:	6 in. (152.4 mm)
Wheel Base:	45.5 in. (1156 mm)
Turning Radius:	24 in. (610 mm) to inside of rear wheel
Front Tires:	15 x 6.00 x 6 Pneumatic
Rear Tires:	16 x 6.60 x 6 Pneumatic

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Common Replacement Parts

Listed below are part numbers for the more common replacement parts. Use the order form at the back of the manual to order a complete, illustrated parts manual. Only genuine replacement parts will assure optimum performance and safety. Do not attempt repairs or maintenance unless proper procedures and safety precautions are followed. For assistance in any area, see your dealer.

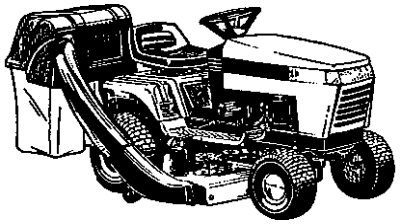
QTY PER UNIT	DESCRIPTION	PART NUMBER
1	Drive Beil • Engine to Hydro Transmission (Mfg. Nos. 1692156, 1692164)	1656960
1	Drive Bell ▪ Engine to Hydro Transmission (Mfg. Nos. 1692259, 1692263)	170164
1	Drive Bell ▪ Engine to Gear Transmission	1706114
1	Drive Bell ▪ Mower	108505
1	Keys ▪ Ignition (2 keys with Ring)	122263
2	Headlight Bulb	1677371
2	Blade ▪ Mower (Standard)	1657569
3	cotter Pin ▪ Levelling Clevises 8 Rod	918447
1	Spring Clip ▪ Mower PTO Rod	166767
1	Cotter Pin ▪ Mower PTO Rod	918448
2	Hitch Pin ▪ Mower	156306
2	Safety Clips -for Hitch Pins	176012
1	Battery ▪ 340 Cold Cranking Amps	1686215
1	Fuel Filter	173206
1	Interlock Switch ▪ PTO	1701580
1	Interlock Switch -Transmission	1666586
1	Interlock Switch ▪ Seat	1700636
1	Interlock Switch ▪ Foot pedal (Hydro Models, Mfg. Nos. 1692259, 1692263)	1665586

DESCRIPTION	PART NUMBER
Simplicity Engine Oil:	
• SAE5W-30 Cold Weather Engine Oil	*1685576
. SAE 30W ▪ 32" and above	*1685659

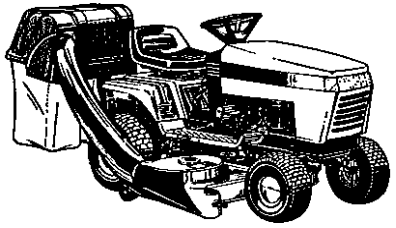
*Case of 12 qts. See your dealer to buy individual quarts.

Grease Gun Kit	1686510
8 Oz. Tube -for above	103077
Touch-Up Paint	
Deep Orange Spray Paint. 13 Oz. Can	1686611
Deep Orange Paint, 1 Qt.	1685612
Deep Orange, 1/2 Oz. Touch-up Dauber	1685615
Gloss Black Spray Paint, 13 Oz. Can	1685639
Gloss Black Paint, 1 Qt.	1685641
Pneumatic Tire Sealant ▪ Stops Tire Leaks. Prevents Rats.	
11 Oz. Tube	1685523
Hourmeter Kit	1685535
Designer **Seat Cover.**	1685540
Cleaner, Polish, Sealant & Protectant	
6 Oz. Bottle	1665696
Degrlmer/Degreaser	
32 Oz. Bottle with Trigger Spray	1665619
1 Gallon Bottle	1885621

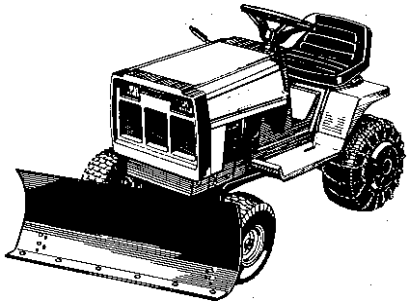
Optional Attachments & Accessories



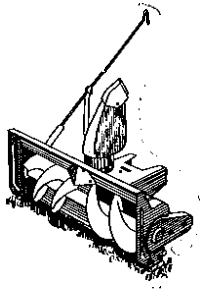
DELUXE TWIN CATCHER - For the best lawn appearance.



TURBO COLLECTION SYSTEMS - Collect grass clippings, thatch, and leaves with powerful turbo collector. Can be used with 6.5 bu. twin bag collector (shown above), 10 bu. dump cart, or QuadBagger™ .



42" DOZER BLADE - For snow removal and light dozing of dirt, gravel, etc.



36" SNOWTHROWER - Efficient single stage operation to handle the heaviest of snows.

36" MULCHER/SHREDDER KIT - Includes discharge baffle and shredder blades.

TIRE CHAINS for traction.

HOURMETER to record operating time.

FRONT WEIGHT to improve steering and stability with rear mounted attachment.

REAR WHEEL WEIGHTS to improve traction and stability.

DUMP CART for vacuum collector and hauling chores.

SNOW CAB to shield operator from blowing snow and wind.

NOTE: Some attachments require accessories. See your dealer or the attachment operator's manual.

36' **MULCHER/SHREDDER** KIT - Finelychops grass clippings into tiny particles. Helps to fertilize your lawn and eliminates the need to bag or rake grass and leaves.

Parts Manual Availability

Parts Manuals are fully illustrated. All of the assemblies are shown in exploded views which show the relationship of the parts and how they go together. Important assembly notes and special torque values are included in the illustrations. For standard hardware, a torque specification chart is included.

For the manual applicable for your model, contact the Simplicity Customer Publications Department at (414) 284-8519. Have the following information available when phoning in your request.

Model: _____

Mfg. No.: _____

Your Name: _____

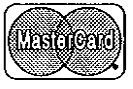
Address: _____

City, State, Zip: _____

Visa/MasterCard No.: _____

Expiration Date: _____

Allow 3-4 weeks for delivery.



Extend Equipment Life - Use Only Genuine Factory Authorized Repair Parts

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Notes

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